DOCUMENT RESUME

ED 415 547 CS 509 672

TITLE	Proceedings of the Annual Meeting of the Association for Education in Journalism and Mass Communication (80th, Chicago, Illinois, July 30-August 2, 1997): Visual Communication.
INSTITUTION	Association for Education in Journalism and Mass Communication.
PUB DATE	1997-07-00
NOTE	180p.; Some papers contain photocopied material that may not reproduce well. For other sections of these Proceedings, see CS 509 657-676.
PUB TYPE	Collected Works - Proceedings (021) -- Reports - Research (143)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	Advertising; Color; *Females; Graphic Arts; Higher Education; Illustrations; *Journalism Education; Journalism History; Media Research; Newspapers; Periodicals; *Photojournalism; Sexuality; State Courts
IDENTIFIERS	Chicago Tribune IL; Television News; *Visual Communication

ABSTRACT

The Visual Communication section of the Proceedings contains the following seven papers: "Teaching the Use of Color: A Survey of Visual Communication Division Members" (Lyle D. Olson and Roxanne Lucchesi); "The Development of Self- Efficacy in Young Women in Relation to the Perception of Attention to Sexuality as Power in Advertising Images" (Cecelia Baldwin); "Cameras in Courtrooms: Dimensions of Attitude of State Supreme Court Justices" (F. Dennis Hale); "A Time Out of Mind: When the Chicago Tribune Rescued Trapped Suburban Women" (Alan Fried); "The Flapper in the Art of John Held, Jr.: Modernity, Post-Feminism, and the Meaning of Women's Bodies in 1920s Magazine Cover Illustration" (Carolyn L. Kitch); "Political Endorsements in Daily Newspapers and Photographic Coverage of Candidates in the 1995 Louisiana Gubernatorial Campaign" (John Mark King); and "Learning News through the Mind's Eye: The Impact of Supporting Graphics in Television News" (Stefan A. Jenzowsky; Thomas Knieper; Klaus B. Reginek). Individual papers contain references. (RS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 415 547

PROCEEDINGS OF THE ANNUAL MEETING OF THE ASSOCIATION FOR EDUCATION IN JOURNALISM AND MASS COMMUNICATION (80th, Chicago, Illinois, July 30-August 2, 1997):

VISUAL COMMUNICATION

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☑ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
J. McGill
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

BEST COPY AVAILABLE

Teaching the Use of Color: A Survey of Visual Communication Division Members

By

Lyle D. Olson

and

Roxanne Lucchesi

Department of Journalism and Mass Communication

South Dakota State University

A paper presented to the

Visual Communication Division,

Association for Education in Journalism and Mass Communication,

at the

1997 Annual Convention

in Chicago, IL

July 30 – August 2

Teaching the Use of Color: A Survey of Visual Communication Division Members

Abstract

This paper presents the results of a survey to determine the extent to which journalism and mass communication educators are teaching the use of color and how they are doing it. It includes lists of the most used and top ranked resources for teaching the use of color. The respondents also indicated that students in their programs do not receive enough training in the use of color and that computer hardware and software resources at their schools to teach color are lacking.

Teaching the Use of Color: A Survey of
Visual Communication Division Members

Using computers to gather online information, creating information graphics to accompany prose, scanning and retouching photographs digitally, and using color effectively on the printed page. These four skill areas, relatively new to journalism and mass communication curriculum, have become essential skills for today's students who wish to pursue careers in advertising, print journalism, public relations, and the new media.

It is a lot to keep up with, and new resources and studies appear frequently in each of these four areas. This study zeroes in on how journalism educators teach the fourth skill —using color well.

"Color is every journalists' business," writes Pegie Stark Adam in *Color, Contrast, and Dimension in News Design*. "Writers and editors should be concerned about how their words are displayed in type, organized, and designed. ... Photographers should be concerned with how their images 'read' on a page. ... Designers should be concerned with which colors work well in pulling story elements together" (1995, p. 1). And, color is also the business of students who wish to enter advertising, public relations, and new media.

"Color has become a design basic, and it is up to the generation now entering the profession to learn how to use it to communicate effectively," writes Daryl Moen (1995, p. 126) in *Newspaper Layout and Design*. What methods and resources are available for educators to teach this generation savvy use of color?

In *Color for the Electronic Age*, Jan White writes, "If color were simple, it would be easy. But color is anything but simple, once you get deeper than its simplest superficialities. It is not just complex in its technical aspects or in the effects it creates. It

is even more complex in the way we talk about it and in the way we control it " (1990, p. 187).

These three authors' statements illustrate two facts—1) it is important that students who plan to enter advertising, print journalism, public relations, and new media know how to use color effectively, and 2) using color well is not simple and, correspondingly, teaching the effective use of color is not easy.

For various reasons, such as improved technology and heightened audience expectations, the use of color has increased dramatically in all areas of the print media. Teaching the effective use of color, however, is in the infant stages at some journalism programs.

There are perhaps other journalism educators who, like the authors of this study, may not feel very qualified to teach the use of color on the printed page but teach classes in which they should do so. They may be at a small school with less specialized faculty. They may lack formal academic training or professional experience in working with color to the extent and sophistication that it is used today. Nonetheless, they feel the need to start teaching the use of color in certain classes, or, if they are already doing so, to teach it more effectively. One goal of this study was to find out how skilled teachers of this topic go about teaching it.

Two simple research questions guided the study: 1) To what extent are journalism educators across the nation teaching the use of color, and 2) how are they doing so?

The purpose of this descriptive study, thus, was to gather information on how journalism educators—specifically members of the Visual Communication Division—teach the use of color and to obtain resources and tips on how to do so effectively. We hoped to obtain material—resources, sample classroom exercises, teaching tips, course syllabi—to share with others who wish to bolster their effectiveness in teaching the use of color.

Literature Review

The authors pursued this baseline, fact-finding study because they were not aware of any published research that examined how the use of color is taught in journalism and mass communication programs and the extent to which it is taught.[1] An increasing body of research, however, has examined the use of color in the print media.

One recent study is Sheree Josephson's "Questioning the Power of Color" in *Visual Communication Quarterly* (1996). Using eye movement data, she found that "color photographs may not be as powerful of a communication tool as believed by newspaper designers such as myself" (p. 7).

In 1994, Cindy Brown presented a paper to the Visual Communication Division on "Color's Influence on the Content and Origin of Newspapers." She reported,

> Little research about the content of color photographs in newspapers has been published. However, several related areas have been studied. These studies fall into four major categories: 1) reader preference for color; 2) the number of papers using color; 3) the use of color as a competitive tool, and 4) the content and origin of color newspaper photographs. (p. 4)

After summarizing 13 studies from 1976 to 1991 in these four areas, Brown reported on the results of her analysis of front page photographs in 10 newspapers. She found that the move from using black-and-white photographs only to using color affects both the content and origin of photos.

Anthony McGann and David Snook-Luther (1993) examined "Color Quality in Print Advertising" in *Journalism Quarterly*. Their experimental study showed that "use of color is important to the reader, but the quality of color is not critical" (p. 934).

Mario Garcia and Pegie Stark's 1991 *Eyes on the News* eye movement study at The Poynter Institute is, of course, a seminal study on the use of color in newspapers. (Josephson refers to the "enormous contributions" but unreplicated results of that

study.) Among other things, Garcia and Stark found that color does not automatically draw more viewers to a photograph.

Along with academic research on the use of color, numerous trade publications also provide valuable resources for teaching the topic. One recent example is Bruce Fraser's "Color in Mind" in *Adobe Magazine* (1996) which delves into such topics as "how light interacts with objects" and "the physiology and culture of color."

In 1990, White, electronic art and graphics editor of *Electronic Publishing & Printing*, wrote a series of articles—such as "How to Use Color Functionally," "'Easy to See' is Not Necessarily 'Easy to Read,'" and "Color Panel Do's and Don'ts"—for art and design professionals. Other desktop publishing magazines, such as *Publish* and photography magazines also run articles on the use of color.

Numerous books --from old to recent—and book chapters are valuable resources for journalism and mass communication educators who teach the use of color. Many of these are listed later in Table 6.

Methodology

We created a four-page "Teaching the Use of Color Survey" (Appendix A) with 18 items to examine the extent to which journalism educators across the nation are teaching the use of color and how they are doing so. The survey contained six items to obtain demographic information about the respondents. To pilot test the survey, we had three individuals troubleshoot the instrument, including two nationally prominent members of AEJMC's Visual Communication and Advertising Divisions.

In addition, we compiled a "Selected Resources for Teaching Color" (Appendix B) that included 11 books and 11 book chapters or sections. We asked respondents to indicate the resources they had used, to rank the three resources they have found most useful, and to list additional resources. The list was not meant to be exhaustive, but rather a starting point to compile the most used and most effective resources, as judged by educators who teach the use of color.

In early February 1996, we sent the survey and two copies of the resource list (one for respondents to return and one for them to keep) to 450 members of AEJMC's Advertising and Visual Communication Divisions. We used the 1995-96 AEJMC Directory to identify division members who listed teaching areas that might include teaching the use of color.

Although we wanted to obtain insights from educators in the Advertising Division, we were concerned that the disparate nature of the teaching areas within that division might result in many unreturned surveys. That concern proved to be true. Because the response from the Advertising Division was so low, we decided to zero in on members of the Visual Communication Division.

In mid-March 1996, we sent a postcard reminder to non-respondents within the Visual Communication Division. In early May, we mailed a second survey to 185 non-respondents.

Information about the Respondents

Of the 252 surveys sent to members of the Visual Communication Division, 103 or 41 percent were returned.

The respondents' academic rank was: full professor, 20.4 percent; associate professor, 28.6 percent; assistant professor, 34.7 percent; instructor, 10.2 percent; and lecturer or adjunct, 6.1 percent.

Almost 38 percent of the respondents were from schools with 200 to 500 majors; 32.3 percent from schools with more than 500 majors; 15.1 percent from schools with 100 to 199 majors; 12.9 percent from schools with less than 50 majors; and 2.2 percent from schools with 50 to 99 majors.

Forty-seven percent had an earned doctorate and 42 percent a master's degree. The gender mix was 51.6 male and 48.4 percent female.

The respondents indicated that their primary teaching responsibilities were: advertising, 29 responses; news editorial, 67 responses; and other, 33 responses,

including visual communication (11 of the 33) and public relations (10 of the 33). Because the respondents selected more than one area, these responses do not add up to 103.

The respondents' years of full-time teaching experience were: one to five years, 33.0 percent; six to 10 years, 24.4 percent; 11 to 15 years, 20.9 percent; 16 to 20 years, 11.0 percent; and more than 20 years, 11.0 percent.

Results

Of the 103 respondents, 78.6 percent (81) said they teach the use of color in at least one of their classes, while 21.4 percent (22) said they did not.

Of the 22 who do not, eight said teaching color was not appropriate content for the classes they teach. Ten others said it may appropriate content to teach, but they were not doing so (see Item 2 on Appendix A for some of the reasons why). Additional write-in reasons given included "we are too busy with fundamentals," "it's obvious in television news," "we have only black and white monitors and printers," and "something else has to go to fit it in."

Of the 22 who do not teach the use of color, 11 said they may teach color in the future and three said they would teach it in the future. Eight said they did not plan to do so.

We asked those who teach the use of color to identify the class or classes and level (by course number) and to indicate the approximate time they devote to the topic. The results, summarized in Table 1, indicated 159 different classes, with the largest groups falling into three categories: 32 graphics/graphics communication classes, 20.1 percent of the total; 31 photojournalism/photography classes, 19.5 percent; and 25 visual communications classes, 15.7 percent. Twelve publication design classes, 7.6 percent of the total, was the next highest category, followed by eight areas each with less than five percent of the total. Fifteen classes (9.4 percent) fell into a miscellaneous

category and included such classes as media messages and women and journalism, or classes for which we did not know the names, such as CAD/CPR 202.

As indicated in Table 2, 39.0 percent of the classes (62) are at the 300/3000 level, 18.2 percent (29) are at the 400/4000 level, 14.5 percent (23) are at the 200/2000 level, 10.7 percent (17) are at the 100/1000 level, and 6.3 percent (10) at the graduate level. For 18 courses (11.3 percent), the level was not given. Thus, 63.5 percent of the classes in which color is taught are at the junior level or above.

As can be seen in Table 3, 24 percent of the respondents indicated that they devoted two or three complete lectures to the use of color (one quarter of those also included one or two labs with the two or three lectures). Twenty percent included material about color in parts of several lectures (29 percent of that group also included one or two labs).

Ten percent of the respondents taught the use of color in three to five complete lectures, while 4.7 percent used more than five lectures. In addition, almost 13 percent used more than two labs.

The survey asked respondents who teach the use of color to identify what topics they teach. These results, summarized in Table 4, show that 91.4 percent teach color symbolism (i.e., mood, temperature, connotations, preferences, etc.), 85.2 percent teach color terms (hue, saturation, value, etc.), 80.2 percent teach color uses, 77.8 percent teach color theory, 72.8 percent teach color production (such as the four-color printing process, spot color, color systems), 61.7 percent teach computers and color, and 51.9 percent teach color photography.

Of those who teach color production, 77.8 percent teach the four-color printing process, 71.6 percent teach spot color, 65.4 percent teach the color separation process, and 58 percent teach color systems (Pantone, Trumatch, etc.).

Ten respondents listed additional topics that they cover in their classes, such as color applications in consumer communication, color placement by signatures on an

imposition, costs of color printing and separations, color production for video, intercultural connotations of color, optical color systems, and thinking and seeing in color for a photojournalist.

On a 1 (strongly disagree) to 5 (strongly agree) scale, we asked those who teach color to respond to this statement: "The amount of time I spend teaching the use of color has increased in the last three years." The mean response was 3.33 compared to a mean of 3.48 to "I expect that the amount of time I spend teaching the use of color will increase in the next three years."

The survey asked respondents "How did you make room in your course material to include color instruction?" and provided only two specific responses, including "deleted outdated or less important material" (21.6 percent) or "shortened material" (5.4 percent). Fifty respondents to this item (67.6 percent) selected "other" and most of those indicated that color had always been part of the class, an option we should have included but did not.

Next, a key portion of the survey asked respondents who teach color to "evaluate the techniques you have used in teaching the use of color," using a scale of 1 (not effective) to 5 (very effective). The results, shown in Table 5, indicated that class critiques of good/bad examples of color usage were the most effective technique (with a mean of 4.46), followed by exercises/assignments on color computer monitors (4.32), and manual exercises/assignments (4.13). The lowest mean of 3.64 was for lectures. No technique was rated as ineffective.

We broke the exercises/assignments on color computer monitors down further by asking respondents to analyze the following methods with the mean response indicated: with color printouts, 4.60; without color printouts, 2.76; using PageMaker and/or QuarkXPress, 4.46; using Photoshop, 4.22; and using Freehand and/or Illustrator, 4.19.

For this item, respondents diligently filled in an "other" category, listing 21 separate techniques they have used. Some of these suggestions were different ways to

combine options we had provided (such as *lectures with demonstrations and lectures* with examples), techniques or tools we did not list (such as examples from business, use of slides and overhead transparencies), and some were similar but with more specifics than the options we listed.

Some suggestions, however, were unique, including using non-linear digital video, color paste ups and graphics collections, Polaroid film in a manual exercise, cutting/pasting to uncolorize and colorize pages, and demonstrations of color mixing.

We asked respondents, "How important is it for the following students to have knowledge in how to use color effectively?" again using a 1 to 5 Likert scale. With a mean of 4.69, the respondents indicated that it was most important for photojournalism majors to have this knowledge, followed by advertising majors (4.60), public relations majors (4.05), news editorial majors (3.68), and all journalism/mass communication majors (3.55). An other category resulted in 19 write-in responses (4.278), including broadcast journalism, new media, design, graphic journalism, and magazine majors.

Do students view instruction in the use of color as important? We asked the respondents to indicate their level of agreement with the following statement: "Our students in each of the following areas view instruction in the use of color as very important." With 72.6 percent agreeing or strongly agreeing, it was the respondents' perception that photojournalism students were most aware that color instruction was important; followed by advertising students, 65.6 percent agreeing or strongly agreeing; public relations students, 48.5 percent; and print journalism students, 36.0 percent.

Respondents were also asked to indicate their level of agreement with this statement: "The following students at my school receive enough instruction in the use of color to prepare them adequately for their future careers." Less than half (43.3 percent) of the respondents agreed/strongly agreed that photojournalism students received enough color instruction. For the other areas, the agree/strongly agree

percentages to this statement were lower yet: public relations students, 42.3 percent; advertising students, 40.0 percent; and print journalism students, 32.9 percent.

Do the respondents feel qualified to teach the use of color? Seventy-nine percent of the respondents agreed/strongly agreed that they were qualified to teach the use of color to print journalism students. The percentages were slightly lower for the other three areas: public relations, 73.0 percent; advertising, 72.1 percent; and photojournalism, 71.4 percent.

The survey respondents who teach the use of color in their classes indicated the extent to which they had "discussed and planned how to teach color with" their colleagues formally (9.0 percent), informally (59.0 percent), never (19.2 percent) or both formally/informally (12.8 percent).

In addition, the respondents who teach the use of color indicated the extent to which they had "discussed and planned how to teach color with others outside their department" formally (11.3 percent), informally (59.2 percent), never (19.7 percent), and both formally/informally (9.9 percent).

What qualifications do the respondents have for teaching the use of color? Of those who teach the use of color, 69.1 percent indicated they had completed undergraduate or graduate courses in color usage, 54.3 percent said they had attended professional seminars on the use of color (i.e., Society of Newspaper Design, The Poynter Institute), 88.9 percent had professional work experience using color, 82.7 said they taught themselves via reading, observing, etc.

For the 22 respondents who do not teach the use color, the percentages were, as to be expected, much lower. Only 31.8 percent had coursework in the use of color, 13.6 percent had attended professional seminars, 45.5 percent had work experience using color, and 31.8 percent taught themselves.

Last, we asked respondents about the computer resources at their school. Of those who do teach the use of color in their classes, 46.9 percent agreed/strongly agreed

that the "computer hardware resources at my school are adequate to teach the use of color well," while only 25.0 percent of those who do not teach the use of color agreed/strongly agreed with the statement.

In addition, 49.4 percent of those who teach color agreed/strongly agreed that the "software resources at my school are adequate to teach the use of color well." Again, only 25 percent of those who do not teach color agreed/strongly agreed.

Resources for Teaching Color

The "Selected Resources for Teaching Color" (Appendix B) included 11 books and 11 book chapters or sections. We asked respondents to indicate the resources they had used, to rank the top three resources they have found most useful, and to list additional resources.

Table 6 shows the top 15 resources that respondents indicated they used the most, while Table 7 lists the top 15 resources by ranking.

Garcia's "Color" chapter in the third edition of *Contemporary Newspaper Design* topped both lists. Forty-nine respondents indicated they had used his chapter as a resource. In addition, when respondents ranked their top three resources, Garcia's chapter received 41 points (with seven first place ratings at three points each, seven second place ratings at two points each, and six third place ratings at one point each).

Garcia and Stark's *Eyes on the News* was the second most used resource (40 mentions), but it dropped to third in the rating totals behind Roy Paul Nelson's "Color" chapter in the *Design of Advertising*.

The respondents listed over 50 additional resources they had used to teach the use of color. Although two resources were mentioned three times—Hideaki Chijiiwa's *Color Harmony* and Theodore Conover's "Color" chapter in *Graphic Communications Today*—and seven were mentioned two times each, they did not make either top 15 list.

Resources cited twice included Josef Albers' *The Interaction of Color*, Michael Bruno's *Pocket Pal*, Agfa Corporation publications, Robert Hirsch's *Exploring Color Photography*, and Dale Russell's *Colorworks 1: The Red Book*. Three separate books by Faber Birren—*Color and Human Response*, *Principles of Color*, and *The Symbolism of Color*—were also mentioned.

Discussion

To what extent are journalism and mass communication educators across the nation teaching the use of color and how are they doing so were the two research questions for this study. This survey of 103 Visual Communication Division members helped answer those questions.

The survey revealed that at least 81 educators at journalism and mass communication programs around the United States are teaching the use of color in at least 159 different classes and that over 70 percent are devoting parts of several lectures, two entire lectures or more, or two labs or more to the topic.

The survey also uncovered a typical good news/bad news scenario. It is good news that 79 percent of the respondents agreed/strongly agreed that they were qualified to teach the use of color to print journalism students. The percentages were slightly lower (71 to 72 percent) for the other three areas—advertising, photojournalism, and public relations—but still strong.

In addition, when we asked how respondents made room in their course material to include color instruction, two-thirds of the respondents indicated that color had always been part of the class, a finding we should have anticipated but did not. We expected to find that in recent years survey respondents had increased the amount of color instruction they provide.

It is not as good news that despite feeling qualified to teach the use of color and despite having included the topic in their course material for some time, the respondents said that students in their programs do not receive enough training and that the

resources they have to teach color are not enough. Only 33 to 43 percent of the respondents agreed/strongly agreed that advertising, photojournalism, print journalism, and public relations students receive enough instruction in the use of color to adequately prepare them for future careers.

It is also not good news, although not unexpected, that although 72.6 percent of the respondents indicated that photojournalism students view instruction in the use of color as important, only 36.0 percent of print journalism journalism students do so.

Of those who teach the use of color in their classes, less than half agreed/strongly agreed that the computer hardware or software resources at their college or university were adequate to teach the use of color well. Of those who do not teach the use of color, only 25.0 percent agreed/strongly agreed that the computer hardware or software resources at their school were adequate.

The respondents indicated that their students were not receiving enough instruction in the use of color. But, at the same time, they did not indicate any plans to increase the amount of instruction on this topic at their colleges and universities in the future.

High percentages of respondents indicated that they taught color terms (85.2 percent), the uses of color (80.2 percent), color theory (77.8 percent), and color production (72.8 percent).

The highest response, however, was for color symbolism (i.e., mood, temperature, connotations, preferences, etc.) with 91.4 percent indicating that they covered that topic. Obviously, the evocative aspects of color are particularly important to these educators. These aspects, however, are also the most difficult to teach. In *Color in Mind*, Fraser writes, "Physiology, psychology, culture, and even the language we speak all influence our color perception in subtle ways that resist quantification" (p. 43).

Class critiques of good/bad examples of color usage were judged as the most effective teaching technique, followed by exercises/assignments on color computer

monitors, and manual exercises/assignments (i.e., using colored pencils). Interestingly, respondents indicated that using manual exercises/assignments, with a mean of 4.13, and using computers, with a mean of 4.32, were almost equally effective, indicating perhaps this it is possible to teach some aspects of effective color usage without sophisticated hardware and software.

The respondents indicated that it was most important for photojournalism majors to have knowledge of how to use color effectively, followed by advertising, public relations, print, and all journalism/mass communication majors. The means, however, did not vary too widely, corresponding with Stark Adam's comments cited in the introductory paragraphs that color is "every journalist's business." If photojournalists know how to capture images in color effectively, but editors, designers, and writers do not know how to display those images well and how to add appropriate accompanying prose, the photojournalists' work will be diminished.

The WED—writing, editing, design— concept of writers, editors, and designers working together collaboratively fits well with the survey respondents' indication that all journalism and mass communication majors should receive instruction in how to use color effectively.

Overall, the 81 respondents who teach the use of color are quite confident of their ability to do so, and they have included color usage in their course material for quite some time. There was an indication, however, that educators in the smaller schools were not as confident of their ability to teach the use of color.

At the end of the survey we asked respondents "to send additional information, such as syllabi and course exercises/assignments, teaching tips, or any comments you think would be helpful to others who wish to teach color more effectively." Other than one person who sent a syllabus, the respondents did not send tips, sample exercises/assignments, etc., perhaps because of the work involved in doing so.

There is considerable expertise among the respondents in how to teach the use of color effectively, and there is a group of journalism educators, including the authors, who do not feel especially qualified to teach the use of color on the printed page who could benefit from some of their specific knowledge.

The respondents to this survey did, however, identify the top 15 resources they used the most and the top 15 resources by ranking. There were no dominant resources. Instead, lots of folks are using lots of different resources to teach the effective use of color. Even the most used resource—Garcia's "Color" chapter in *Contemporary Newspaper Design* —is used by only 62.8 percent of the respondents.

We were surprised that one of the resources we find especially useful—*Designing with Color* edited by Susan Berry and Judy Martin—was used by only eight respondents. Undoubtedly, others who responded to this survey and listed their favorite resources will be surprised to find that few placed those resources on their "can not do without list."

The respondents listed over 50 additional resources they had used to teach the use of color. Those books and book chapters, plus the 22 we listed on the survey, provide a good starting point for a bibliography on this topic. This list of resources, however, could be expanded and organized to be more useful to both qualified and less qualified journalism educators who teach the use of color.

Although we did not enter this study with hypotheses to test, additional statistical tests need to be done on this baseline data to determine if any of the relationships are statistically significant.

Additional research into how the use of color can be most effectively taught in journalism and mass communication schools in the country needs to be done to best prepare, as Moen suggests, a generation now entering the profession that needs to learn how to use color to communicate effectively.

Conclusion

The use of color has increased dramatically in the past few years, and many journalism educators have kept pace. Over three-fourths of the respondents to this survey indicated color has always been a part of their coursework.

The same respondents, however, said that students in their programs do not receive enough training in the use of color and that the computer hardware and software resources they have to teach color are not enough to adequately prepare them for future careers.

Josephson says that most "newspaper designers are probably making their decisions regarding the use of color like I was—by gut reaction" (p. 4). White indicates that "color choice can be based on some degree of reason and confidence rather than personal 'liking'" (p. 22).

Preparing a new generation of communicators to use color effectively will involve continued effort and sharing of knowledge by the skilled educators who participated in this study. It will require that some educators become more qualified to teach the use of color. And, it will involve additional new resources—such as Stark Adam's excellent *Color, Contrast, and Dimension in News Design*—and continued research into effective teaching methods that will help students develop the ability to make color choices based on reason and confidence in tandem with gut reactions.

TABLE 1
Color Taught by Course

General Course Title	Total Responses	% of Total
Graphics/Graphic Communication	32	20.13%
Photojournalism/Photography	31	19.51%
Visual Communications	25	15.72%
Publication Design	12	7.55%
Advertising Design/Portfolio	7	4.40%
Newspaper Design	6	3.77%
Desktop Publishing	6	3.77%
Editing	6	3.77%
Electronic Media	6	3.77%
Magazine Editing/Design	5	3.14%
Art	4	2.52%
Writing	4	2.52%
Miscellaneous	15	9.43%
Total	159	100.00%

TABLE 2
Color Taught by Class Level

Course Level	Level	% of Total
100/1000	17	10.69%
200/2000	23	14.47%
300/3000	62	38.99%
400/4000	29	18.24%
500/5000	8	5.03%
600/6000	2	1.26%
No Level	18	11.32%
Total	159	100.00%

TABLE 3
Amount of Time Teach Color

Amount of Time	Total Responses	% of Total
Two or three lectures and one or two labs	35	23.65%
Part of several lectures and one or two labs	31	20.94%
More than two labs	19	12.84%
One entire lecture and one or two labs	16	10.81%
Three to five lectures and one or two labs	15	10.14%
Five plus lectures	7	4.73%
Part of one lecture	8	5.40%
Various Combinations/Miscellaneous	17	11.49%
Total	148	100.00%

TABLE 4
Topic Areas Taught

Topic Area	Total Responses	% of Total
Color symbolism (mood, temperature, connotations, preferences, etc.)	74	91.36%
Color terms (hue, saturation, value, primary and secondary colors, etc.)	69	85.19%
Color uses (association, emphasis, retention, etc.)	65	80.25%
Color theory (including use of color wheel)	63	77.78%
Color Production	59	72.84%
Four-color printing process	*63*	*77.78%*
Spot color	*58*	*71.60%*
Color separation process	*53*	*65.43%*
Color systems (Pantone, Trumatch, Focaltone, etc.)	*47*	*58.02%*
Computers and color	50	61.73%
Color Photography	42	51.85%
Other	10	12.35%

TABLE 5
Evaluation of Techniques Used to Teach Color

Technique	Mean Score
Class critiques of good/bad examples of color usage	4.462
Exercises/assignments on color computer monitors	4.316
without color printouts	*2.762*
with color printouts	*4.600*
using Adobe photocopy	*4.222*
using PageMaker &/or Quart Xpress	*4.462*
using Aldus Freehand &/or Adobe Illustrator	*4.188*
Manual exercises/assignments	4.125
Lecture with class discussion of reading material	3.792
Lecture	3.638
Other	4.857

TABLE 6
Most Used Resouces for Teaching the Use of Color

1 Garcia, Mario. (1993). "Color" in *Contemporary Newspaper Design*. 3rd ed. Englewood Cliffs, NJ: Prentice Hall. [49]

2 Garcia, Mario and Pegie Stark. (1991). *Eyes on the News*. St. Petersburg, FL The Poynter Institute. [40]

3 Harrower, Tim. (1995). Color in "Special Effects" chapter in *The Newspaper Designer's Handbook*. 3rd ed. Dubuque, IA: Wm. C. Brown. [39]

4 Nelson, Roy Paul. (1994). "Color" in *The Design of Advertising*. 7th ed. Dubuque, IA: Wm C. Brown. [36]

5 Baird, Russell, et al. (1993). "Communicating with Color" in *The Graphics of Communication*. 6th ed. New York: Harcourt Brace Jovanovich. [35]

6 Denton, Craig. (1992). "Color" in *Graphics for Visual Communication*. Dubuque, IA: Wm. C. Brown. [34]

7 Itten, Johannes. (1973 ed.) *The Art of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen. Originally published in Ravensburg, Germany. [25]

(tie) Itten, Johannes. (1970). *The Elements of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen. Originally published in Ravensburg, Germany. [25]

9 Lester, Paul. (1995). "Light and Color," "Color, Form, Depth and Movement" and color discussions within other chapters in *Visual Communication Images with Messages*. Belmont, CA: Wadsworth. [24]

10 Moen, Daryl. (1995). "Communicating with Color" in *Newspaper Layout and Design*. 3rd. ed. Ames, IA: Iowa State University Press. [22]

11 Finberg, Howard and Bruce Itule. (1990). "Reproduction and Color" in *Visual Editing*. Belmont, CA: Wadsworth. [16]

(tie) White, Jan V. (1990). *Color for the Electronic Age*. New York: Watson-Guptill. [16]

13 Adam, Pegie Stark. (1995). *Color, Contrast, and Dimension in News Design*. St. Petersburg, FL: The Poynter Institute for Media Studies. [16]

14 Bohle, Robert. (1990). "Color" in *Publication Design for Editors*. Englewood Cliffs, NJ: Prentice Hall. [13]

15 White, Jan. V. (1994). *Color for Impact*. Westport, CT: Published by White. [12]

n = 78

Key: The number in brackets after the entry indicates the number of respondents who indicated they used the book or book chapter as a resource.

TABLE 7
Top 15 Ranked Resources for Teaching the Use of Color

1 Garcia, Mario. (1993). "Color" in *Contemporary Newspaper Design*. 3rd ed. Englewood Cliffs, NJ: Prentice Hall. [41]

2 Nelson, Roy Paul. (1994). "Color" in *The Design of Advertising*. 7th ed. Dubuque, IA: Wm C. Brown. [30]

3 Garcia, Mario and Pegie Stark. (1991). *Eyes on the News*. St. Petersburg, FL The Poynter Institute. [29]

4 Harrower, Tim. (1995). Color in "Special Effects" chapter in *The Newspaper Designer's Handbook*. 3rd ed. Dubuque, IA: Wm. C. Brown. [26]

5 Denton, Craig. (1992). "Color" in *Graphics for Visual Communication*. Dubuque, IA: Wm. C. Brown. [25]

6 Lester, Paul. (1995). "Light and Color," "Color, Form, Depth and Movement" and color discussions within other chapters in *Visual Communication Images with Messages*. Belmont, CA: Wadsworth. [19]

7 Baird, Russell, et al. (1993). "Communicating with Color" in *The Graphics of Communication*. 6th ed. New York: Harcourt Brace Jovanovich. [18]

8 Itten, Johannes. (1970). *The Elements of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen. Originally published in Ravensburg, Germany. [16]

9 White, Jan V. (1990). *Color for the Electronic Age*. New York: Watson-Guptill. [15]

10 Itten, Johannes. (1973 ed.) *The Art of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen. Originally published in Ravensburg, Germany. [14]

11 Moen, Daryl. (1995). "Communicating with Color" in *Newspaper Layout and Design*. 3rd. ed. Ames, IA: Iowa State University Press. [13]

12 Wong, Wucius. (1987). *Principles of Color Design*. New York, NY: Van Nostrand Reinhold. [11]

13 Adam, Pegie Stark. (1995). *Color, Contrast, and Dimension in News Design*. St. Petersburg, FL: The Poynter Institute for Media Studies. [10]

14 Lester, Paul. (1996). "Color Concerns" and sections on coloring text and graphics in *Desktop Computing Workbook*. Belmont, CA: Wadsworth. [9]

15 White, Jan. (1994). *Color of Impact*. Westport, CT: Published by White. [8]

n = 78

Key: The number in brackets after the entry indicates the point total for rankings (1st place ranking = 3 points; 2nd place = 2 points; and 3rd place = 1 point)

Endnote

[1]This study is similar to other baseline studies of how various topics are taught in journalism and mass communication classrooms around the United States. For example, DeFleur and Davenport's "Innovation Lag: Computer-Assisted Classrooms vs. Newsrooms" in *Journalism Educator* (Summer 1993, 26-36) examined the extent to which computer-assisted journalism was being taught in the United States.

References

Adam, Pegie Stark. (1995). *Color, Contrast, and Dimension in News Design: Understanding the Theory of Color and its Applications*. St. Petersburg, FL: The Poynter Institute for Media Studies.

Brown, Cindy. (1994). "Color's Influence on the Content and Origin of Newspapers." A paper presented to the Visual Communication Division at the Association for Education in Journalism and Mass Communication Annual Convention, Atlanta.

Fraser, Bruce. (1996). "Color in Mind." *Adobe Magazine*, 8:1, 42-48.

Garcia, Mario and Pegie Stark. (1991). *Eyes on the News*. St. Petersburg, FL: The Poynter Institute for Media Studies.

Josephson, Sheree. (1996). "Questioning the Power of Color." *Visual Communication Quarterly*, Winter, 4-7, 12.

McGann, Anthony and David Snook-Luther. (1993). "Color Quality in Print Advertising." *Journalism Quarterly*, 70:4, 934-938.

Moen, Daryl (1995). *Newspaper Layout and Design: A Team Approach*. 3rd. ed. Ames: Iowa State University Press.

White, Jan. (1990). *Color for the Electronic Age: What Every Desktop Publisher Needs to Know About Using Color Effectively in Charts, Graphs, Typography, and Pictures*. New York: Watson-Guptill Publications.

---. (1990). "Color Panel Do's and Don'ts for EP&P Designers." *Electronic Publishing & Printing*, April, 44-45.

---. (1990). "Easy to See' is Not Necessarily 'Easy to Read." *Electronic Publishing & Printing*, August/September, 46-48.

---. (1990). "How to Use Color Functionally: 53 EP&P Tips." *Electronic Publishing & Printing*, January/February, 34, 36-37, 40.

Appendix B

Selected Resources for Teaching Color

Please check the resources you have used and rank the top 3 resources (books and book chapters/sections together).

Used	Top 3	
		•Books
___	___	Adam, Pegie Stark. (1995). *Color, Contrast, and Dimension in News Design*. St. Petersburg, FL: The Poynter Institute for Media Studies.
___	___	Berry, Susan and Judy Martin. (1991). *Designing with Color*. Cincinnati, OH: North Light Books.
___	___	Emery, Richard. (1994). *Type & Color 2*. Rockport, MA: Rockport Publishers.
___	___	Garcia, Mario and Pegie Stark. (1991). *Eyes on the News*. St. Petersburg, FL: The Poynter Institute.
___	___	Groff, Vern. (1990). *The Power of Color in Design for Desktop Publishing*. Portland, OR: Management Information Source, Inc.
___	___	Itten, Johannes. (1973 ed.) *The Art of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen. Originally published in Ravensburg, Germany.
___	___	Itten, Johannes. (1970). *The Elements of Color*. New York: Van Nostrand Reinhold. Translated by Ernst van Hagen Originally published in Ravensburg, Germany.
___	___	Kieran, Michael. (1994). *Understanding Desktop Color*. 2nd ed. Berkeley, CA: Peachpit Press.
___	___	White, Jan V. (1990). *Color for the Electronic Age*. New York: Watson-Guptill.
___	___	White, Jan. V. (1994). *Color for Impact*. Westport, CT: Published by White (call 203-226-3298).
___	___	Wong, Wucius. (1987). *Principles of Color Design*. New York, NY: Van Nostrand Reinhold.
		•Book Chapters or Sections
___	___	Baird, Russell, et al. (1993). "Communicating with Color" in *The Graphics of Communication*. 6th ed. New York: Harcourt Brace Jovanovich.
___	___	Bohle, Robert. (1990). "Color" in *Publication Design for Editors*. Englewood Cliffs, NJ: Prentice Hall.
___	___	Denton, Craig. (1992). "Color" in *Graphics for Visual Communication*. Dubuque, IA: Wm. C. Brown.
___	___	Finberg, Howard and Bruce Itule. (1990). "Reproduction and Color" in *Visual Editing*. Belmont, CA: Wadsworth.
___	___	Floyd, Elaine and Lee Wilson. (1994). "Turn Up the Volume With Color" in *Advertising from the Desktop*. Chape Hill, NC: Ventana Press.
___	___	Garcia, Mario. (1993). "Color" in *Contemporary Newspaper Design*. 3rd ed. Englewood Cliffs, NJ: Prentice Hall.
___	___	Harrower, Tim. (1995). Color in "Special Effects" chapter in *The Newspaper Designer's Handbook*. 3rd ed. Dubuque, IA: Wm. C. Brown.
___	___	Lester, Paul. (1995). "Light and Color," "Color, Form, Depth and Movement" and color discussions within other chapters in *Visual Communication Images with Messages*. Belmont, CA: Wadsworth.
___	___	Lester, Paul. (1996). "Color Concerns" and sections on coloring text and graphics in *Desktop Computing Workbook*. Belmont, CA: Wadsworth.
___	___	Moen, Daryl. (1995). "Communicating with Color" in *Newspaper Layout and Design*. 3rd. ed. Ames, IA: Iowa State University Press.
___	___	Nelson, Roy Paul. (1994). "Color" in *The Design of Advertising*. 7th ed. Dubuque, IA: Wm C. Brown.

Please list additional resources on the back.

BEST COPY AVAILABLE

Cameras in Courtrooms: Dimensions of Attitude of State Supreme Court Justices

By F. Dennis Hale

Professor
Department of Journalism
Bowling Green State University
Bowling Green, Ohio 43403

dhale@falcon.bgsu.edu
(419) 372-6825

This paper was delivered to the Visual Communication Division of the Association for Education in Journalism and Mass Communication in August 1997 in Chicago.

Cameras in Courtrooms: Dimensions of Attitudes of State Supreme Court Justices

by F. Dennis Hale

Introduction

This study extrapolated the future development of public policy concerning cameras in state courtrooms by surveying state supreme court justices, the government officials who make most of the policy about the issue. The intent was to identify judicial characteristics and other variables that are associated with support for, or opposition to, the presence of cameras and broadcast equipment in courtrooms. Are such attitudes related to judges' political party, criminal prosecuting experience, belief in judicial activism, or service in nonjudicial, elective office? And are justices' attitudes on cameras related to their perceptions about fairness, accuracy and thoroughness of press coverage of themselves and their courts?

These questions were explored by interviewing recently retired members of state supreme courts. Retired justices were surveyed because judicial ethics prevent sitting justices from publicly commenting on substantive law. In the interest of judicial fairness, and the appearance of fairness, justices must avoid making public statements that indicate a preference or bias concerning substantive law.

The study focused on state supreme courts because such courts make the vast majority of law on the issue of permitting cameras in state courtrooms. In most cases, camera policy is established when state supreme courts draft and approve such policies as formal rules for the operation of all appellate and trial courts in their state. In most instances such rules are applied on an experimental basis for a few years before they are made permanent. In a few cases, state judicial commissions draft such rules, but the commissions are either dominated by members of the state supreme court or by other state judges who are quite sensitive to the concerns of the state supreme court. In a very few states, legislatures have passed statutes pertaining to cameras in courtrooms, but such laws are subject to review by the state supreme courts.[1] In conclusion, state supreme courts make most of the policy on cameras in courtrooms because of the concept of separation of powers in federal and state constitutions.

[1] "Lawmakers, Judges Dispute Rules for Cameras in Court," *Editor & Publisher*, June 21, 1986, p. 92.

State courts constitute one of three, separate branches of government which have exclusive control over their own domain; state courts possess innate or inherent rights that are independent from the influence of nonjudicial, government officials. Neither the governor, or executive branch of government, nor the state legislature, may interfere with such innate rights.

Thus any study of the formation or modification of public policy on cameras in state courtrooms must focus on members of the fifty state supreme courts.

History of Issue

The right to photograph state court proceedings has evolved from a vague right in the 1920s, to a prohibition in the 1930s, to access in the 1980s. A 1934 textbook on the rights of journalists described the right as being poorly defined. Although some judges allowed photographers in their courtrooms, the book said that judges clearly had the authority to ban cameras from their proceedings.[2]

Trial judges soon lost their discretion to permit cameras in their courtrooms. Susanna Barber and other scholars associate the change in policy with the 1935 trial of Bruno Hauptman for the kidnapping and murder of the baby of Charles and Anne Lindbergh.[3] The trial in Flemington, N.J. created a media circus. However, with two exceptions, cameras were banned from the courtroom during the actual trial. Just the same, the American Bar Association used the various abuses during the trial as a justification in the fall of 1937 to amend its Canons of Professional and Judicial Ethics to ban photographers and radio broadcasters from courtrooms. In 1952 the rule was amended to also ban television broadcasters.

The ABA's Canon 35 was quickly recognized by state bar associations and state appellate and trial courts and by 1965 only two of the 50 states, Colorado and Texas, allowed cameras in courtrooms. The banning of cameras from courtrooms was endorsed by the U.S. Supreme Court in the 1965 *Estes* decision when four judges agreed that cameras violated the 6th Amendment right of a criminal defendant to a fair trial.[4] A fifth

[2] Fredrick Seaton Siebert, (New York: Appleton-Century Co., 1934), p. 52.

[3] Susanna Barber, *News Cameras in the Courtroom: A Free Press-Fair Trial Debate* (Norwood, N.J.: Ablex Publishing, 1987), P. 9.

[4] *Estes v. Texas*, 381 U.S. 532 (1965)

justice, in a concurring opinion, said that cameras should only be banned in highly sensational trials.

Despite Canon 35 and the *Estes* decision, various states, beginning with Alabama and Washington in 1976, began to experiment with allowing cameras in state courtrooms. And in 1978 the Conference of State Chief Justices voted 44-1 to allow cameras in state courtrooms.

Such experimentation by the states was tolerated by the U.S. Supreme Court in its *Chandler* decision of 1981.[5] The Supreme Court ruled 8-0 that cameras in the courtroom had not deprived burglary defendant, Noel Chandler, of his constitutional rights. The court said that "At present no one has been able to present empirical data sufficient to establish that the mere presence of the broadcast media inherently has an adverse effect on that process." The ruling was neutral; it did not mandate or encourage states to allow cameras in their courtrooms. The court simply ruled that the states were free, if they wished, to experiment with courtroom cameras. Three years later the ABA responded to *Chandler* by replacing Canon 35 with Rule 3A(7) of its Code of Judicial Conduct which said that state appellate courts had the proper authority to allow cameras in courtrooms.[6] *Chandler* provided a catalyst for allowing cameras in courtrooms. Prior to the decision 23 states allowed cameras; 7 more states allowed cameras in 1981, the year of *Chandler*; and 18 states modified their rules and allowed cameras after 1981. By 1996 only two states, Mississippi and South Dakota, banned cameras from courtrooms.[7]

The debate about courtroom cameras continues. The O.J. Simpson criminal trial of 1995 generated considerable discussion about the issue, but few state policies were subsequently changed. In 1996 the California Judicial Council voted to grant that state's trial judges greater discretion in controlling courtroom cameras. Also in 1996, trial judges in a number of high profile cases such as the second Menendez brothers trial and the Simpson civil trial opted to close their courtrooms to cameras. But with those exceptions, policy on cameras in state courtrooms remained unchanged following the O.J. Simpson criminal trial.

Although 48 states permit cameras in courtrooms, their policies vary greatly. A 1990 summary of the state rules described them as a "crazy

---

[5] *Chandler v. Florida*, 449 U.S. 560 (1981).

[6] Don R. Pember, Mass Media Law, 1997 ed (Madison, Wisc : Brown & Benchmark), P. 408.

[7] "Cameras in the Courtrooms," *Quill*, October 1996, Pp. 22-29

quilt of provisions."[8] The summary reported that some states permit coverage of criminal trials only if the defendant assents, that many states prohibit coverage of sex crimes or divorce proceedings, and that other states restrict the coverage of jurors. Differences were just as dramatic in 1996. Although the majority of states allow coverage of trial and appellate courts and civil and criminal trials, some were more restrictive. Illinois, Louisiana, Indiana and Nebraska limited camera coverage to appellate courts. Maine and Oregon allowed coverage of trial courts but not of appellate courts. Delaware, Maine and Maryland allowed coverage of civil trials but not criminal trials. And Utah allowed still camera coverage of trial courts but not television coverage.[9] It is one thing to permit coverage and quite another to facilitate coverage. The Washington Supreme Court moved in the direction of facilitating coverage in 1995 when it allowed the Washington Public Affairs Network, a free cable channel, to broadcast all of the oral arguments before the court. During the court's 1995-96 term oral arguments for 45 cases were broadcast over the cable network which reaches 670,000 households.[10]

While cameras are allowed in most state courts, they are banned in the U.S. Supreme Court and in federal trial courts. However, the 13 circuits of the U.S. Court of Appeals have been authorized by the Judicial Conference of the United States to create their own rules for cameras.[11] This decision by the Judicial Council followed a three-year experiment by that body allowing camera coverage of six trial courts and two appeals court in the federal judicial system.[12]

Review of Literature

A modest amount of research has been conducted about attitudes on cameras in courtrooms. Included are a few surveys of the general public and a number of surveys of trial court judges and attorneys. But there have been few surveys of state appellate court judges, the persons responsible for most of the public policy on cameras in the courtroom.

The very few surveys of the general public have identified

8 Mary Anderson, "Cameras in the Courtroom," *Presstime*, March 1990, Pp. 14-16.

9 *Op. cit.*, *Quill*, Pp. 28-29, footnote 6.

10 Ronald Goldfarb, "A Supreme Court That Welcomes Cameras," *American Journalism Review*, July/August 1996, p. 15

11 "Camera Ban Eased in Fed Appeals Courts," *News Photographer*, April 1996, P. 12.

12 "Federal Courts Approve Camera Experiment," Presstime, October 1990, p. 37.

substantial support for cameras in courtrooms. A 1984 survey of 308 registered voters in Toledo, Ohio found that 52 percent favored cameras in state courtrooms and 59 percent approved of camera coverage of oral arguments before the U.S. Supreme Court.[13] Men were more supportive than women; however, political party did not make a difference. A 1979 survey of student opinions at a community college in central Texas also identified public support for courtroom cameras. The survey included 22 statements supportive of specific media rights. The student respondents gave the third highest support to the statement, "Press photographers should have the right to film criminal trials that are open to the public."[14] Some 64 percent favored the statement.

State courts frequently approve rules to permit cameras in courtrooms after allowing such access on a two- or three-year experimental basis. Then surveys are conducted of trial judges and attorneys to examine the impact of cameras. There have been two summaries of these state surveys. Most recently, in July 1995, the Courtroom Television Network reviewed such studies in 24 states and found that judges and attorneys agreed in 23 of the states that courtroom cameras did not influence trial participants.[15] The report concluded that "evidence gathered by the states' studies has repeatedly and overwhelmingly concluded that television coverage does not disrupt court proceedings or impair the administration of justice."

In an earlier summary, Barber evaluated 19 such studies in 11 states during the years of 1975-83.[16] Barber found that strong majorities of judges in studies agreed that cameras did not harm the judicial process and from 73 to 88 percent said that witnesses were unaffected. However, judges did resent the increase in administrative duties caused by cameras. Attorneys in general were quite mixed in their opinions, but defense attorneys strongly objected to cameras. Barber concluded that despite their favorable attitude about the impact of courtroom cameras, a majority of judges with TV experience favored the policy, and a majority without the experience opposed the policy.

The significance of personal experience with courtroom cameras

---

13 "Ohio Opinions," *Broadcasting*, November 26, 1984, P. 61. "Poll Finds Cameras Approved," *News Photographer*, January 1985, P. 11.

14 F. Dennis Hale, "Student Opinions on Print v. Broadcast Rights," paper, spring conference, Mass Communication and Society Division, Association for Education in Journalism, Kent, Ohio, March 1981.

15 "Facts and Opinions About Cameras in Courtrooms," Courtroom Television Network, July 1995, P. 1.

16 *Op. cit.*, Barber, Pp. 75-84, footnote 2.

also was evident in academic surveys of judicial opinions in three states. In 1957 Cashman and Froke surveyed trial judges in Illinois. At the time the ABA's Canon 35 had no legal standing in Illinois, but it had been adopted by the Illinois Bar Association.[17] Strong majorities of judges objected to courtroom cameras: 68 percent opposed still photos taken with existing light, 86 percent opposed motion pictures and 89 percent opposed live radio or television coverage.

Similarly, a survey of Indiana judges and attorneys conducted in 1982 also uncovered strong opposition.[18] At the time state law prohibited cameras in courtrooms and the state chief justice opposed any changes in the policy. The survey found that Indiana judges, prosecuting attorneys and local bar association presidents generally agreed in supporting the camera ban. The judges agreed with 13 of 16 anti-access arguments with the strongest support for: causes attorneys to be flamboyant, inhibits witnesses, distracts witnesses, and distracts jurors. The same judges also rejected 3 of 4 pro-access statements. The only pro-camera statement that judges supported was that access would be of educational value. However, many judges qualified this favorable response by indicating that it only would apply to instances of complete coverage of trials.

Quite different attitudes were expressed in a 1992 survey of judges and attorneys in Ohio.[19] The study was conducted when the state had 13 years of experience with cameras in courtrooms. General trial judges and county prosecuting attorneys pretty much agreed in supporting courtroom cameras. Similar to other studies, defense attorneys were less supportive and sometimes opposed cameras. The trial judges supported 8 of 12 positive statements about courtroom cameras. The greatest support of 74 percent was for the statement that even with cameras present, judges could preserve judicial dignity and allow greater public access to the proceedings. The second highest support was for the statement: "The use of still and/or video cameras in the courtroom during a trial is consistent with the principles of openness required in judicial proceedings." The judges' criticism of courtroom cameras was quite mild.

---

17 Gerald Cashman and Marlowe Froke, "Canon 35 as Viewed by the Illinois Judiciary," *Journal of Broadcasting*, 2: 295-310 (1958).

18 Greg Stefaniak, "Indiana Legal Leaders' Perceptions of Camera Trial Access Arguments," *Journalism Quarterly*, 61:399-403 (1984).

19 "Judges, Prosecutors OK Cameras in Court," *Coalition for Open Government*, Ohio Newspaper Association, Spring 1993, p. 3.

A majority agreed that cameras inhibited witnesses and distracted jurors. And a majority agreed that guidelines needed to be made more precise, particularly for such matters as cable feeds and wireless microphones. Despite these qualifications, 60 percent of the trial judges agreed that the current rules "allow the appropriate amount of judicial control and need no changes."

The only study to examine the attitudes of state supreme court members on courtroom cameras was a 1979 *Washington Post* survey of constitutional lawyers, political science professors and state chief justices. Some 56 percent of the chief justices responded. A majority of the lawyers, professors and chief justices favored camera access on three questions: 53 percent favored camera access to trials in general, 67 percent favored camera access to oral arguments before the U.S. Court of Appeals, and 65 percent favored access to oral arguments before the U.S. Supreme Court.

In conclusion, there have been no systematic analyses of the dimensions of the opinions of state supreme court justices on the issue of cameras in the courtroom. More importantly, there has been no examination of judicial characteristics and other factors that are associated with justices' attitudes on courtroom cameras.

Methodology

The purpose of this study was not so much to measure the opinions of state supreme court justices on courtroom cameras as it was to explore the factors that were associated with those opinions. How are attitudes on cameras related to justices' legal education, pre-court career, method of election, attitudes about other media rights, and opinions about press coverage of the state supreme court? Those were the major concerns of this study.

It would have been preferable to interview sitting members of state supreme courts. But judicial ethics prevent active justices from commenting on substantive matters of the law that they might be required to adjudicate. Thus recently retired members of state courts were surveyed instead of active members.

The universe of interview subjects consisted of justices who had retired from, or left, state supreme courts during the six years of 1991-96. A list of retirees was created by comparing 1996 members of state

supreme courts as listed in the regional reporters of the National Reporter System with the names in the same reporter volumes in 1991. The seven regional reporters that report the court members and all decisions of the 50 state supreme courts are: *Atlantic*, *North Eastern*, *North Western*, *Pacific*, *South Eastern*, *South Western* and *Southern*. Also consulted was the 1996 volume of *The American Bench* which lists all federal and state judges at the trial and appellate level in the United States. Lastly, clerks and/or public information officers at all 50 state supreme courts were contacted by telephone to confirm the list of former justices.

This original search yielded 140 names. Names were deleted for those judges who had died, a few who had become federal judges, a few whose addresses could not be found, one judge in prison and one impeached judge. This left a universe of 120 names.

The first copy of questionnaires was mailed in late November 1996. Each judge received the four-page questionnaire, a personalized letter, a return envelope, and a one-page summary of the researcher's publications concerning state appellate courts and mass media law. The second copy of the questionnaires was mailed in late February 1997. Each judge received a personalized letter, return envelope, sheet with headlines and bylines of legal articles by the author, and an endorsement letter from the dean of the National Judicial College.

The questionnaire consisted of 55 closed-ended items on judicial background, legal background, news coverage of the state supreme court, substantive mass media law and five items on cameras in the courtroom. Respondents evaluated most statements with five-point, Likert scales. The questions on courtroom cameras were:

> Journalists should enjoy significant rights to take cameras and broadcast equipment into state courtrooms. (agreement)
>
> The state supreme court is an appropriate entity to provide this camera access to courtrooms. (agreement)
>
> What happened to your attitude about cameras in the courtroom after the O.J. Simpson trial? (supportiveness)
>
> What do you expect to happen to your state's rules on courtroom cameras in the next five years? (supportiveness)
>
> What do you expect you state's trial judges will do during the next five years concerning cameras in their courtrooms? (restrictiveness)

Eight other pairs of questions, or sixteen all together, examined justices' support for a specific media rights and support for the state supreme court's involvement in those rights. Besides courtroom cameras, these questions examined libel, privacy, source confidentiality, public meetings and records, access to courts, student speech rights, pamphlets at shopping malls, and obscenity.

Seventeen questions examined judicial background and demographics such as age, supreme court experience, trial court experience, prosecuting experience, nonjudicial elective office, party identification, liberalism and judicial activism. And thirteen questions examined evaluations of press coverage of the state supreme court. Justices evaluated the fairness, accuracy and thoroughness of coverage of written decisions, oral arguments and judicial elections, and they contrasted news coverage of their court with coverage of the U.S. Supreme Court and the state legislature and state executive. The justices also evaluated press coverage of themselves and estimated citizen awareness of the state supreme court.

Lastly, justices were asked four miscellaneous questions: approval for using state constitutions to expand speech rights, knowledgeability of the news business compared to medicine and road construction, importance of newspaper endorsements in state supreme court elections, and justices' concern about future treatment by the news media when they rule on mass media law.

Besides the 55 questionnaire items, nine variables were coded for the states of the judges: population, percent whites, percent urban residents, personal income, existence of an intermediate appellate court, selection of judges via the Missouri Plan, years of statehood, college educated, and region of the country.

The statistical analysis consisted of contrasting the five responses on courtroom cameras with responses on the other substantive areas of mass media law, and correlating the courtroom camera variables with the news coverage variables, background facts and state characteristics and other variables. The statistical program, SPSS for Windows, was used.

Findings

Some 50 questionnaires were returned by May of 1997, half from each mailing. This represented 42 percent of the 120 subjects in the

universe. The 50 subjects came from 33, or 70 percent, of the possible 47 states. The surveyed subjects were representative of the universe of retired justices. The characteristics of the states of the respondents were quite similar to the characteristics of all states (Table 1). The major exception was that Southern states were underrepresented. But characteristics were similar for such important facts as race, personal income, whether judges were appointed or whether states had an intermediate appellate court.

Judges exhibited considerable negativism in the five major questions about courtroom cameras. First, more judges rejected than accepted a general right of journalists to take cameras into state courtrooms. The mean score on the 0-4 scale was 1.63 (see Table 2). This was the general attitude of the surveyed justices even though all except one of them came from states which allowed cameras in their courtrooms. This was the lowest support for nine survey items on journalists' rights. The 1.63 mean

Table 1. Representativeness of Judicial Respondents

	Sample Characteristics	State Characteristics
Region		
Northeast	20%	18%
Midwest	28%	24%
South	24%	32%
West	28%	26%
Intermediate Court	76%	76%
Appointment	56%	60%
Minorities	14%	16%
Urban Residents	68%	68%
Population (millions)	6.1	5.0
Income ($100s)	182	182
Years of Statehood	155	156
College Educated	19.9%	19.6%

compared to a 3.52 mean for the right of the press and public to attend state trials. The court access item received the strongest support.

Despite their skepticism about cameras in courtrooms, justices were quite comfortable with state courts setting policy in that area. The mean support for such judicial policymaking was 2.90, which was the fifth highest of the nine measures of state policymaking for media rights.

Of the five questions on courtroom cameras, judges responded most negatively to the one about the impact of the O.J. Simpson criminal trial on their attitudes. Although 54 percent said their attitudes remained the same, 44 percent said it became less supportive of cameras (mean of 1.27)..

Despite such negativism, judges predicted that camera access would not change much in the future. Some 66 percent said that state rules for cameras would remain about the same during the next five years, with 14 percent predicting more access and 20 percent less access. And 69 percent predicted that trial judges in their state will allow the same camera access during the next five years. However, 23 percent predicted less access and 8 percent more access.

Table 2. Judicial Attitudes on Cameras in Courtroom

	Favorableness*					
	4	3	2	1	0	Mean
General Attitude	17	23	0	27	33	1.63
State Court Policymaking	56	19	0	8	17	2.90
Attitude Since Simpson	0	2	54	13	31	1.27
Future State Judicial Rules	2	12	66	10	10	1.86
Future Trial Judge Decisions	0	8	69	14	8	1.69

*Most figures represent percentages; 4=very positive, 3=somewhat positive, 2=uncertain, 1=somewhat negative, 0=very negative

Just what were these attitudes on courtroom cameras related to? That information is provided in Table 3.

First, with two exceptions the general attitude on courtroom cameras was not related to background or environmental factors. The exceptions were a justice's self-reported liberalism and judicial activism. But the other variables--including age and method of judicial selection--were unrelated to this general attitude.

Second, no variables were significantly related to attitudes on state judicial policymaking in the area of courtroom cameras. The predictor variables in this study simply were not associated with that attitude.

Five variables were related to change in opinion about courtroom cameras since the O.J. Simpson criminal trial. Criminal defense experience and one positive evaluation of press coverage of state supreme courts were negatively associated with the Simpson question. And judicial activism, liberalism, and reliance on state constitutions for speech rights were positively related to attitudes on the Simpson question. These three variables, all associated with liberalism, were related to a growing support for courtroom cameras since the Simpson trial.

Few variables were significantly associated with the other two attitudes on courtroom cameras, development of future rules and application by trial judges. Future state rules was positively correlated with support for the state constitution to expand media rights, whites and college educated in the state, and negatively correlated with urban population. And the attitude on future behaviors by trial judges was positively associated with the white population and citizen awareness of the state supreme court, and negatively associated with state population, urban population, college educated and the existence of a state, intermediate appeals court.

In conclusion, this study found that state supreme court justices were quite unenthusiastic about allowing cameras and broadcasting equipment in state courtrooms. This is quite surprising considering the fact that 48 states allow such camera access. If these attitudes of recently retired justices reflect the opinions of judges still serving on state supreme courts, camera access will not be expanding in the near future. The news media will do well to maintain the access that they currently enjoy. And they may have to assert themselves to accomplish that. Lastly, these attitudes on courtroom cameras were quite idiosyncratic. They did not appear to be related to much.

Table 3. Factors Associated With Attitudes on Courtroom Camera

Correlates	General Attitude	State Policy	Since O.J.	Future Rules	Future Trials
Judicial Background					
Appellate Experience	.01	.04	.05	-.04	-.03
Trial Experience	-.09	.16	-.07	-.16	-.07
Criminal Defense	-.15	.01	-.33*	-.25	-.14
Civil Government	.08	.03	-.21	-.02	.12
Prosecution	.05	.16	-.07	.05	.11
Corporate	.05	-.10	-.10	-.15	-.02
Nonjudicial Elective	.12	.10	-.10	-.06	-.07
Public College	.07	.11	.05	.09	.12
Age	.01	.06	.01	.08	.10
Democrat	.11	-.01	.17	-.13	-.15
Liberal	.29*	.15	.41*	.08	.00
Judicial Activism	.34*	.17	.34*	.12	.00
State Constitution	.15	.19	.41*	.26*	.06
Attitudes Toward Media					
Court Coverage	.08	.01	.01	.12	.11
Election Coverage	-.04	-.02	-.09	-.04	.00
Personal Coverage	.04	.09	-.02	.12	.08
Versus Legislature	-.08	-.02	-.35*	-.09	.06
Versus U.S. Supreme	-.18	-.20	-.24	.01	.07
Citizen Awareness	.04	-.20	.03	.16	.29*
Knowledge of News	-.07	-.06	-.14	.00	.08
Newspaper Endorsements	-.04	.24	.02	-.22	-.12
Media Retaliation	.07	-.20	-.01	.13	.12
State Characteristics					
Population	-.10	.05	-.08	-.19	-.23*
Race (Whites)	.12	-.10	.12	.26*	.33*
Urban	-.01	.15	-.01	-.26*	-.24*
Income	-.07	.14	.02	.07	-.06
Intermediate Court	-.06	.18	.09	-.22	-.31*
Appointed Judges	-.01	.15	.13	.09	.04
College Educated	-.10	.00	.00	.26*	-.25*
Years of Statehood	-.14	-.07	-.17	.07	.03

*.05 significance, two-tailed test

BEST COPY AVAILABLE

The Development of Self Efficacy in Young Women in Relation to the Perception of Attention to Sexuality as Power in Advertising Images

Cecelia Baldwin

Associate Professor

Journalism and Mass Communications

San Jose State University

San Jose, California 95192

(408) 924-3287

home: (408) 934-1461

baldwin@jmc.sjsu.edu

Submitted to the Research Session of the Visual Communication Division

The Development of Self Efficacy in Young Women in Relation to the Perception of Attention to Sexuality as Power in Advertising Images

Abstract

This empirical study examines the hypothesis that attention to sexuality, in advertising, is perceived as self efficacy, or a personal power enabling one to control one's own life. Semiotic theory provides it's framework. The subject population consisted of two groups of young women, average high school students and advanced placement high school students. The hypothesis was upheld in independent t-tests. Additionally, ANOVA analysis revealed significant differences that may help young women to refute this perception.

The Development of Self Efficacy in Young Women in Relation to the Perception of Attention to Sexuality as Power in Advertising Images

This empirical study examines the hypothesis that attention to sexuality, in advertising, is viewed as power by young women, power being defined as self efficacy or a personal power enabling one to control one's own life. The researcher's previous qualitative study developed the hypothesis of sexuality and power in examining 'at risk' teenage mothers. (1) This empirical study provides a quantitative analysis of a general population of young women's perceptions as it examines the hypothesis in relation to the development of self efficacy in young women. It has been argued that the desire to make decisions and affect outcomes, that is to exercise control, is a basic feature of human behavior. (2) Taylor and Brown have demonstrated that the illusion of control involves the erroneous belief that one can produce a positive outcome when there is not an actual contingency between response and outcome. (3) It is this perceived illusion of control that is being studied. A research instrument using stimulus response, with response based on attribution, was designed to measure the perception of 'attention to sexuality' as 'power' in women's fashion magazine advertisements.

The study statistically affirms the hypothesis that the young women in the study are perceiving sexuality as power, in advertising images, from women's fashion magazines. Although women's stereotypical portrayals and exaggerated sexuality in advertising have been studied for some time, the hypothesis that this exaggeration is being perceived as a personal power is a new hypothesis. The results significantly showed, not only perception of sexual attention as power, but also demonstrated a difference in the strength of the perception between two groups of young women, one, a mainstream high school group of young women enrolled in a non-college bound curriculum, and the other an advanced placement (or honors) group of young women. Both

groups had a significantly higher perception of 'power' in images with exaggerated sexual attention, than in the images with little or no sexual attention. Although still significant, the perceptions of students in advanced placement classes were not as strong as the perceptions of the mainstream high school students, for images of sexual attention.

Sixteen advertisements, from women's fashion magazines were used as stimuli. The subjects responses were analyzed as to the correlation of attention to sexuality in each advertisement, with attributes of personal power and/or attributes that lacked personal power that the subjects had indicated for each advertisement.

Previous studies have shown that young women often act out resistance through the exaggeration of sexuality. (4) This study suggests that this may be occurring because young women are taking what they have been shown as an empowering characteristic (their sexuality) and are exaggerating it. As the study suggests, an exaggerated use of sexuality may be seen as a source of power.

Literature Review

Pease states that the social communication of advertising offers messages that symbolically link people as representatives of social structures and processes. Social scientists have employed semiotic theory to discern the values and beliefs that are widely shared among the public (5). Leiss et al. adds that the implicit and explicit social statements present in advertising. Leiss et al. concluded that the advertising message contains two levels of meaning: the explicit surface message and the implicit message below the surface. (6)

As both Cox and Kuypers have pointed out semiotic theory is utilized to explain how individual roles and identities are partly determined through the transference of meaning through the advertising of products. Eventually, the labels persons ascribe and receive may result in both positive and negative self-fulfilling prophecies (7, 8).

Kellner emphasizes that girls negotiate and construct their own gendered identities through different definitions of what it means to be a woman from the media. (9) Many studies have centered on female portrayals and the sexist depiction of women. (10,11,12,13,14,) In a study of wellness and fitness ads Rudman and Hagiwara found approximately two-thirds of the advertisement photographs examined portrayed women in sexually exploitive poses inappropriate

to their activity. (15) And although Sullivan and O'Connor point out that advertising has shown a wider range of occupational roles for women, they also found an increase in the portrayal of women in purely decorative roles, when the presence of a physically attractive and sexy woman was unrelated to the advertised product. (16) Ferrante discusses how youth, beauty and sexuality are stressed in advertisement showing women. (17) Soley and Kurzbard have shown that there has also been found to be an increase, in advertising, of sexuality and sexual availability. (18) Boddewyn and Kunz demonstrate how sexy body shots are used to advertise diverse types of products from clothing and perfume to cars and power tools. (19) Hall and Crum look at alcohol and beer advertising and the use of continued sexual exaggeration. (20) We can look at these images and say we are not affected by them because we know the portrayal is unreal and many are even laughable but Rankow has demonstrated that even when we believe we are not affected by them we are indeed still affected by them. (21)

Wicks and Yanni have researched the cognitive process of how individuals construct models from television content. (22, 23) Marcus has examined this construction as a part of self development in demonstrating how individuals construct mental models of themselves, call self-schemas. (24) Previously we have seen Gallager demonstrate that a young woman's perception of her body is a psychological construct, often developing a distorted body image of herself. (25) Meyers and Biocca have examined this social construction of self and reveal that advertising and programming provide some of the social cues in the construction of self. They found that a young women's perception of her body can be changed in just 30 minutes of television viewing. The social cues of the media influence which attribute groups will be most important in that individual's self-schema. (26)

In studies of body image it has been shown that media messages develop stereotypes of what actually is beauty, success and health. (27) In developing these stereotypes Joseph has also shown that advertising can develop the feeling of being in control. (28) Judgments of personal control not only influence how people operate in various activities but also determine which activities and environments they choose to expose themselves to. Perceived control has great power to affect the course of our lives by influencing the types of choices we make. Deci and Lent have shown that the area in which perceived control clearly has the most impact is on educational and career choices. (29,30) Pinto and Worobetz have showed how individuals with a

external locus of control have less self esteem and are less resistant to advertising's influence. (31) When perceived control is thought to be 'attention to sexuality' young women may act on this perception and disregard other ways to develop self efficacy. Young women are particularly vulnerable to illusions of perceived control. Hamburg has shown that issues of control and self-determination loom large in adolescence. Physiological changes, transitions to new school environments and friendship groups, and increasing desire for intimacy and bonding threaten the adolescents sense of control and predictability. (32)

While there is a large body of research that addresses the proliferation of attention to sexuality in advertising, there has not been research to link this proliferation of attention to sexuality with the perception of personal power or self efficacy that these images may be creating.

Methods

My subject population consisted of two different targeted groups to be analyzed, a group of young women who were 'advanced placement' or honors high school students, and a group of students who were not enrolled in advanced placement classes nor on a college bound curriculum. A coordinator selected subjects on a first come first serve basis thus giving a random sample of the target groups with the only subject variable being an even age distribution in each group. Each group consisted of 17 to 20 people. "If the effects of the independent variable are strong, we should be able to detect them with about 10 to 20 subjects per group. A moderately strong effect should show up with about 20 to 30 subjects per group. Weaker effects may be detected through larger groups." (33) Therefore I have analyzed for a strong to moderately strong effect. The independent variables consisted of 16 print advertisements from women's fashion magazines. These served as stimuli for the study. A ranking of 1 to 4 was given each ad, as to the degree of sexual attention.

To gather responses for the dependent variables of power and lack of power another scale was developed for the response portion of the study. The response portion of the study was based on attribution. Attribution was chosen for the response portion because pretests showed difficulty in giving an evaluation score of strength or power with a numerical basis (such as the 1-4 scale) when trying to evaluate an advertisement. When applying attribution in pretests there was

agreement as to the uniformity of meaning and correlation of a ranking of power.

The experimental design was both a between-subjects design allowing conclusions to be drawn by making comparisons between the responses of different groups of subjects, and a within-subject design allowing responses to be compared within the group to the different dependent variables. To accomplish the between subject-design I ran a one-way ANOVA statistical analysis on each set of advertisement that are coded as high exaggeration of sexuality and another one-way ANOVA statistical analysis for each set of advertisements that are coded as low or no attention to sexuality. To accomplish the within-subject analysis I used two-tailed t-tests (paired samples) on each group.

Parts of Study

First part: Sixteen stimuli (print advertisements) were selected from the women's fashion magazines. Women's fashion magazines were chosen because MRI (Media Rating Index) showed women's fashion magazines as the type of magazine that was most popular with the age group of young women. Selected ads included portrayals that had a range of sexual attention, from little or no sexual attention, to ads that had a high degree of attention to sexuality. Myself and two colleagues evaluated overall sexual attention. A scale from 1-4 was used. [1= no sexual attention, 2= some attention, 3= some exaggerated sexual attention, 4= very exaggerated sexual attention]

Of sixteen ads, four were ranked #1, (little or no sexual attention) four ads were ranked #2, (some sexual attention) three were ranked #3, (some exaggerated sexual attention) and five were ranked #4 (very exaggerated sexual attention). This study evaluated the responses from those ads ranked #1 (little or no sexual attention) and those ads ranked #4 (exaggerated sexual attention). For the purpose of statistical analysis only advertisements that have been rated as #1 (little or no sexual attention) and #4 (very exaggerated attention to sexuality) were analyzed for significance. This furthers the reliability of the clear differences of sexual attention between the advertisements. All advertisements were used as stimuli so that the subjects didn't have any potential awareness that high and low sexual attention was being studied. They appeared as a cross section of advertisements in women's magazines. All the ads were from women's fashion magazines so the images did not include a more extreme exaggeration of sexuality as can be found

in magazines aimed at sexual attention, such as Playboy, Penthouse, etc., or specialized male audience magazine such as automotive or motorcycle magazines.

The criteria for exaggerated sexuality was showing cleavage, viewing breasts or nipples through clothing and very short skirts and overall increase in skin/body exposure. All ads rated #4 included at least two of the criteria. Ads ranked #3 had one of the above criteria and exposed less of the body. Ads ranked #2 had bared shoulders and or bared backs or were in unnatural poses, such as legs were spread apart. Ads ranked #1 were fully clothed and without any of the previous criteria.

Since there would be a range of ethnic backgrounds in the subjects, ads from a variety of fashion magazines were chosen: Cosmopolitan, Mademoiselle, Ebony, Jet, Essence. Additionally Cosmopolitan Espanol and Vanidades which are aimed at a Hispanic-American audience and the fashion magazine TTO2 which is aimed at an Asian-American audience, where also used. These were used to show visual representations of different racial and ethnic groups.

Second part: The response portion of the study was based on attribution. Young women were shown the above advertisements and chose from a series of 8 "remarks" that determined how they felt about the portrayal of strength or power of the female. The attributed "remarks" were taken primarily from a case study that involved young women's responses to advertising, (34) so they were idiomatic rather than academic. "Remarks" that were to be attributed to the women in the ads were coded numerically (on a scale of 1-4) to evaluate degree of strength or power. (This coding was evaluated and agreed upon by two other researchers.) The attributions that were given the highest and lowest degree of personal power were developed from Rodin et al as they examined self efficacy as control (35) as discussed in the literature review. These highest attribute of personal power was, "She gets what she wants in life." The lowest was, "She doesn't control her own life". Other examples of attributes were "She has confidence", "She is weak", etc. Small groups of five subjects viewed individual copies of the stimulus (16 ads) and filled in the response questionnaire.

Attribution was chosen for the response portion because pretests had shown difficulty in giving an evaluation score of strength or power with a numerical basis. (such as the 1-4 scale) When applying attribution there was agreement as to the uniformity of meaning and correlation of a ranking of power.

Third part: Power and sexual attention were analyzed to evaluate power as a function of overall sexual attention. The set of advertisements that contained high attention to sexuality and the set of advertisements that contained low or no attention to sexual were the independent variables with the attributes of power and lack of power being the dependent variables. Two one-way ANOVA statistical analysis was used to compare between group differences. Two-tailed t-tests (paired samples) were used to compare within group differences. A p value < .05 was used.

Subjects

Group one: Mainstream group

Nineteen subjects in this group completed the study, between the ages of 14 and 18. These young women were enrolled in high school but were not taking any advanced placement or honors classes. They were from a high school in an ethnically mixed middle and upper middle class school district. (See demographic information below)

Group two: Advanced placement or honors group

Seventeen subjects completed the study, between the ages of 14 and 18. These young women were enrolled in advanced placement classes on a college bound curriculum. They were from the same high school as the above subjects.

For both groups a high school teacher acted as coordinator and asked for volunteers to be in a study about advertising. All subjects received a $10.00 honorarium.

Ethnic Enrollment in School District in 1992

Caucasian = 3,101, African-American = 625, Asian = 2,156, Filipino =1,256, Hispanic = 1,578, Pacific Islanders = 100, Native-American =91 (total 8,898)

SAT scores ranked in the middle area with a verbal of 403 and math at 514.

A middle to upper-middle class suburb with an average home cost of $275,000. *

*all district information is according to *Santa Clara County '94*, published McCormack, 1994.

Findings

The study found the hypothesis, which claims the perception of the equating of sexuality and power in advertising to be upheld.

Since the primary aim of the study was the analysis of power the responses in terms of the attribute rated the highest for power as one dependent variable and the attribute rated the lowest for power was analyzed as the other dependent variable. Two separate two tailed t-test were conducted on both the independent variables, ads with high sexual attention and ads for low sexual attention. Significance was found at the <.005 level upholding the perception of power in the ads for sexual attention. (See table 1.) In both groups there is a significantly higher indication of the highest attribute of power in the ads that have a high attention to sexuality (averaged means of 4.05 and 3.59) than in the indication of the lowest attribute of power (average means of 1.05 and 1.06) Both groups perceived the ads with the highest amount of sexual attention to be "powerful." Both groups gave the ads that were of little or no sexual attention a significantly lower indication of the attribute of power. (See tables 3 and 4)

Table 1

Two tailed independent t-tests (paired samples) of Mainstream Group

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD
HS_HP*				4.0526	.705
.162	19	-.410	.081		
HS_LP*				1.0526	.970
.223					

Mean	SD	SE of Mean	t-value	df
3.0000	1.414	.324	9.25	18
.000				

95% CI (2.318, 3.682)

*HS = ads with high sexual attention
HP = attribute with the highest rating of power
LP = attribute with the lowest rating of power

Table 2

Two tailed t-tests (paired samples)

of Advanced Placement or Honors Group

Variable of Mean	Number of pairs	Corr	2-tail Sig	Mean	SD
HS_HP* .322	17	.045	.864	3.5882	1.326
HS_LP* .358				1.0588	1.478

Mean	SD	SE of Mean	t-value	df	2-tail Sig
2.5294	1.940	.471	5.38	16	.000

95% CI (1.532, 3.527)

*HS = ads with high sexual attention
HP = attribute with the highest rating of power
LP = attribute with the lowest rating of power

Table 3

Average means for the Mainstream group's indication of highest attribute of power and lowest attribute of power in ads with the highest rating of sexual attention.

Mean	Standard Deviation	Standard Error	N
Highest attribution of power indicated			
4.05	.70	.16	19
Lowest attribution of power indicated			
1.05	.97	.22	19

Average means for the Advanced Placement or honors group's indication of the highest attribute of power and lowest attribute of power in ads with the highest rating of sexual attention.

Mean	Standard Deviation	Standard Error	N
Highest attribute of power indicated			
3.59	.1.33	.32	17
Lowest attribute of power indicated			
1.06	1.4	.36	17

When looking at the individual advertisements it is interesting to view the percentages at which the students gave indications of power and lack of power for each ad. It is also interesting to note that of the advertisements that had little or no sexual attention there is only one ad that is rated as high as the some of the advertisements with exaggerated sexuality. The researcher actually selected this particular ad because the imagery appeared to be more engaging than with most ads with little sexual attention and wanted to see its potential difference. Although it didn't have as high a percentage as most advertisements with sexual attention, this demonstrates that it is possible to have ads with little or no sexual attention also give a perception of power.

Again the mainstream high school students indicated a higher percentage of power (average 82.1%) in the ads rated highest for sexual attention that the advanced placement students (average 72.8%). Mainstream high school students also indicated a higher percentage of power (average 45.3%) for the ads of rated highest for sexual attention than those rated lowest for sexual attention (37.3%). But of course the importance of this in the the comparison of ads with highest sexual attention and lowest sexual attention. Both groups had a much higher indication of power for the highest rating for sexual attention (mainstream = 82.1% and advanced placement = 72.8%) compared with a much lower indication of power for the ads rated lowest for sexual attention (mainstream = 45.3% and advanced placement = 37.3.) Once again illustrating the strength of the hypothesis. (See tables 4 and 5)

Table 4

Percentage of subjects indicating the highest rating of power for each ad rated highest for sexual attention.

Average Percentage for mainstream high school students (N=19)
82.1%
Average Percentages for advanced placement high school students (N=17)
72.8%

Table 5

Percentage of subjects indicating the highest rating of power for each ad rated lowest for sexual attention.

Percentages for mainstream high school students (N=19)
Average percentage: 45.3%

Percentages for advanced placement high school students (N=17)
average percentage: 37.3%

Two one way ANOVA analysis using the sum of each answer as to the rated indication of power showed a statically significant difference at <.05 of the perception of power between the groups of those ads rated very exaggerated sexual attention and those ads rates little or no sexual attention. It showed a significant difference between the groups in perception of power in ads with images with little or no sexual attention. With the advanced placement subjects indicating a higher association of power in ads with little of no sexual attention than the mainstream subjects had indicated. (See table 6)

This indication of overall power was derived by using the sum of the response for power. The groups showed a significant difference in the overall perception of power between the groups in both the ads rated for highest attention to sexuality and those rated lowest for sexuality. This indicates that there may be factors at work that allow the advanced placement students to begin to refute the equation of sexuality and power. (See table 7 and 8)

Table 6

Analysis of Variance Between Groups

D.F.	Sum of the Squares	Mean Squares	F Ratio	F Prob.
2	129.4555	64.7277	4.3192	.0183

Mean of mainstream group =17.00000
Mean advanced placement group = 13.2353
significant if mean - mean is >+2.7373

Table 7

Sum of means for high association of power with four ads rated highest for exaggerated sexuality

Means for Mainstream high school students

Means	Standard Deviation	Variance	N
3.32	.82	.67	19
3.47	.90	.82	19
3.74	.81	.65	19
3.79	.79	.62	19

average mean: 3.58 for mainstream students

Means for advanced placement students

Means	Standard Deviation	Variance	N
2.65	1.00	.99	17
2.76	1.15	1.32	17
3.06	1.20	1.43	17
3.24	1.03	1.07	17

average mean: 2.93 for advanced placement students

Table 8

Sum of means for high association of power with four ads rated lowest for exaggerated sexuality

Means for Mainstream high school students

Means	Standard Deviation	Variance	N
3.05	.85	.72	19
3.37	1.01	1.02	19
3.47	1.22	1.49	19
3.36	.79	.65	19

average mean: 3.312 for mainstream students

Means for advanced placement high school students

Means	Standard Deviation	Variance	N
2.29	1.21	1.47	17
2.47	1.28	1.64	17
2.53	1.12	1.26	17
2.97	1.14	1.32	17

average mean: 2.565 for advanced placement high school students

Discussion

Many young women feel powerless to control their own lives. This is often shown in rebellion against their schools, their families, etc. They are in resistance to their cultures, to society. Previous studies conducted by both Thomas and McRobbie suggest females don't act out their resistant behavior in the same manner as their male counterparts. (36,37) In studies of young girls' resistance they have been shown to create their resistance through the exaggeration of their sexuality. Both McRobbie and Thomas emphasize the ways in which these girls use sexuality as opposition to authority of school or to middle-class definitions of femininity. The young women that are emphasizing their sexuality are often seen as desiring attention. But this study suggests it may very well be a learned interpretation of the perception of attention to sexuality as power, thus distorting the development of self efficacy.

Cultural symbols are learned through interaction and then those symbols are mediated through interaction. Self-definition is social in nature; the self is defined largely through interaction with the environment. Kellner states that the media are forms of pedagogy that teach us how to be men and women. (38) The cultural symbols arranged by advertising and the media in general (in this case, exaggeration to sexuality) may not only be giving young women a distorted self-definition but the mediation of those symbols and that self-definition may be causing them to act on distorted perceptions and to exaggerate their sexuality to gain personal power or control in their lives.

These young women's "resistance" may be the actual learning process of their limitation in our society and their seeking to control what they have learned to be their only source of power, their sexuality. As advertising communicates images of sexuality as power, young women may reproduce advertising's equating of sexuality and power in their development of self efficacy, and therefore may not learn the true lessons of empowerment but reproduce further disempowerment in the guise and hope of empowerment.

Although this study statistically affirms the hypothesis, and both groups had a high association of sexuality with power, the advanced placement students' perceptions were somewhat less, which demonstrates that the young women in the mainstream group are more affected by these images. Possibly due to dedication to education or intelligence the advanced placement

students may be able to view empowerment in other ways thus helping them to somewhat refute the equation of sexuality and power.

Although it can be speculated that all advertisements employ physically attractive communicators this is different than communications of sexual attention. It is not this study's intent to suggest that advertising is the only way in which young women learn to equate power with sexuality. The entertainment media and other cultural values may contribute to that message.

As Fine has pointed out, young women need to understand their sexuality authentically. (39) They should not see their sexuality as barter for power. When sexuality is seen as power young women may not only loose their ability to create an authentic sexuality but they may not recognize or develop the strengths they possess that could truly allow them to control their own lives.

Continued study is needed. The equation of sexuality and power needs to be studied furthered as do the ways in which young women may be able to refute this equation. The advanced placement or honors group leads us to believe that there may be factors that we can identify that may be allowing young women to refute this equation but certainly the single factor of intent to go to college appears to only partially refute the equation because there is still a significantly greater association of power with attention to sexuality in the advanced placement or honors group as well.

NOTES

1. Baldwin, Cecelia, The Distorted Reflection: The Adaption of Social Reproduction Theory in the Cultural Analysis of Young Women's Perception of Sexuality as Power, Presented at Association of Educators in Mass Communications Annual Conference, Anaheim, 1996.

1. Rodin, Judith, Schooler, Carmi, Schaie, Warner, *Self Directedness: Cause and Effects Throughout the Life Course*, Erlbaum, Hillsdale New Jersey, 1990.

3. Taylor, S., and Brown, J., Illusion and Well-Being: A Social Psychological Perspective. *Mental Health Psychological Bulletin*, 103 193-210, 1988.

4. McRobbie, Angela, and Garber, Jenny, Girls and Subcultures, Hall, Stuart, and Jefferson,

Tony, eds... *Resistance Through Rituals.* London: Hutchinson, 1975.

5. Pease, O. *The responsibility of American Advertising.* New Haven: Yale University Press, 1985.

6. Leiss, William; Kline, Stephen; & Jhally, Sut, *Social Communication in Advertising: Persons, Products and Images of Well Being.* New York: Methuen, 1986.

7. Cox, Harold G., *Later life: The Realities of Aging*, New Jersey: Prentice Hall, 1993.

8. Kuypers, Joseph A. & Bengtson, Vern, L., *Competence and Social Breakdown: A Social-psychological View of Aging*, Human Development, 16(3), 181-201, 1993.

9. Kellner, Douglas, Cultural Studies and Multiculturalism and Media Culture. Dines, Gail and Humez, Jean, eds. Gender, *Race and Class in Media* , Sage, Thousand Oaks, CA, 1995.

10. Alice, Courtney and Sarah Lockeretz,"A Woman's Place: An analysis of the roles portrayed by Women in Magazine Advertisements." *Journal of Marketing Research* , 8.1 (1971) 92-105, 1971.

11. Alice Courtney and Thomas Whipple, *Sex Stereotyping in Advertising*, Lexington, Mass.: Heath, 1983.

12. P. Belknap and W. M. Leonard, "A Conceptual Replication and Extension of Erving Goffman's Study of Gender Advertisements." *Sex Roles,* 25, 3/4 1991 103-18, 1988.

13. J. H. Ferguson P. J. Kreshel and S. F. Tinkham, In the pages of Ms.: Sex Role Portrayal of Women in Advertising. *Journal of Advertising*, 40-51, 1990.

14. Stephen Craig. "The Effect of Television Day Part on Gender Portrayals in Television Commercials: A Content Analysis." *Sex Roles,* 26.5-6, 197-211, 1992.

15. William Rudman, Akiko Hagiwara, Sexual Exploitation in Advertising Health and Wellness Products, *Women & Health*, Vol. 18(4), 77-90, 1992

16. Sullivan, G., and O'Conner, T.V, Women's Portrayal In Magazine Advertising, *Sex Roles*, vol.18, 181-188, 1984.

17. Ferrante, C. and Kingsley, S. Images of Women in Television Advertising, *Journal of Broadcasting and Electronic Media*, vol 32 231-237, 1988.

18. Soley, L., Kurzbard, G., Sex in Advertising, *Journal of Advertising*, vol.15, 46-64, 1990.

19. Boddewyn, J. &Kunz, H. Sex and Decency Issues in Advertising: General and Internal

Dimensions. *Business Horizons*, 34, 13-20, 1991

20. Iijima Hall, Christine, and Crum, Matthew, Women and "Body-isms" in Television Beer Commercials, *Sex Roles*, Vol 31, Nos. 5/6, p.329-337, 1994.

21. Rankow, Lana, "Feminists Studies: The Next Stage." *Critical Studies in Mass Communication* s, vol. 6.2, pp.209-215, 1989.

22. Wicks, R.H. Schema Theory and Measurement in Mass Communication Research: Theoretical and methodological issues. in news information process. In S. Deetz (Ed.) *Communication Yearbook,* 15 , 9pp 107-115, Newbury Park CA, Sage, 1991.

23. Yanni, Denice, The Social Construction of Women as Mediated by Advertising, *Journal of Communication Inquiry*, vol. 14, no. 1, P. 71-81, 1990

24. Markus, H. Hamill, R., Sentis, K. Thinking Fat: Self-schemas for Bodyweight and Processing of Weight Relevant Information. *Journal of Applied Social Psychology*. 17(1). pp. 50-71, 1987.

25. S.Gallagher, Body Image and Body Schema: A conceptual clarification. *Journal of Mind & Behavior*, 7(4), 535-554, 1986.

26. Meyers, Philip, Bioca, Frank, The Elastic Body Image: The Effect of Television Advertising and Programming on Body Image Distortions in Young Women, *Journal of Communication,* 42(3) Summer, p. 108-133, 1992.

27. Downs, A.C., Harrison, S.K., Embarrassing age spots or just plane ugly? Physical attractiveness stereotyping as an instrument of sexism on American television commercials, *Sex Roles*, 13 (1/2), 9-12, 1985.

28. Joseph, W.B. The credibility of physically attractive communicators: A review. *Journal of Advertising*, 11(3), 15-24, 1982.

29. Deci,, E. L. & Ryan, R.M. *The Dynamic of Self-Determination in Personality and Development. Self-related Cognitions in Anxiety and Motivation* , pp. 171-199, Hilsdale, NJ, Lawrence Erlbaum Associates., 1987.

30. Lent, R. W Hackett, G. Career Self-efficacy: Empirical Status and Future Directions. *Journal of Vocational Behavior*, 30, 347-382, 1987.

31. Pinto, Mary Beth and Worobetz, Note on Guilt Appeals in Advertising: Covariate Effects of Self-Esteem and Locus of Control. *Psychological Reports*, vol 70, pp. 19-22, 1992

32. Hamburg, B.A., Early Adolescence as a Life Stress Levine, S and Ursin, H, Eds. *Coping and Health*, New York Plenum Press, 1980.

33. Myers, Anne, *Basic Experimental Designs*, Wadsworth., p. 125, 1987.

34. Baldwin, Cecelia, The Use of the Media in Sexuality as Resistance, *Our Violent Society*, California State Research Bureau, California State Library, 1994.

35. Rodin, Judith, Schooler, Carmi, Schaie, Warner, *Self Directedness: Cause and Effects Throughout the Life Course*, Erlbaum, Hillsdale New Jersey, p. 85-103, 1990.

36. McRobbie, Angela, and Garber, Jenny, Girls and Subcultures, Hall, Stuart, and Jefferson, Tony, eds... *Resistance Through Rituals*. London: Hutchinson, 1975.

37. Thomas, Claire, Girls and Counter-school Culture. *Melbourne Working Papers*, Melbourne, 1980.

38. Kellner, Douglas, Cultural Studies and Multiculturalism and Media Culture. Dines, Gail and Humez, Jean, eds. Gender, *Race and Class in Media* , Sage, Thousand Oaks, CA, pp5-17, 1995.

39. Fine, Michelle, *Disruptive Voices, The Possibilities of Feminist Research*, The University of Michigan Press, Ann Arbor, pp 31-60, 1992.

Alan Fried
U of South Carolina
Visual Communication
Wed. 11/27

A Time Out of Mind:
When the Chicago Tribune rescued trapped suburban women

A Chicago Tribune self-promotion advertising campaign from the 1950s was analyzed using ethnographic content analysis and proxemic analysis of photographs. The campaign stands out for the way it depicted its audience, its voice, and for its advertising appeals. Although the appeals hearken back to the Social Ethos described by William H. Whyte, Jr. in The Organization Man and David Reisman's The Lonely Crowd, the ad campaign fits within Media System Dependency Theory.

BEST COPY AVAILABLE

A Time Out of Mind:

When the Chicago Tribune rescued trapped suburban women

Cataloging a collection of newspaper self-promotion advertisements that were published from 1876 through 1970, I came across a curious reader-oriented ad campaign that provides a unique window into the life of suburban women of the 1950s. The campaign, which was published by the Chicago Tribune, features photos of suburban mothers praising the newspaper as a social conduit that will spirit them away from the mundane world of kids and housekeeping and place them in a more exciting sphere. The campaign is a rosetta stone for understanding reader dependence upon a media system and it is something more; it is a somewhat eerie evocation of a time out of mind and the minds that inhabited those times.

I have been examining advertisements that newspapers run on their own behalf in hopes that they might provide new understanding about the growth and development of the press, their advertising practices and their efforts to win the attention of readers. Happily, a treasure trove of more than 4,400 U.S. newspaper self-promotion ads (some dating as far back as 1876) are collected in the voluminous archives of the University of Illinois College of Communications library. These newspaper ads are a small part of the more than three-quarters of a million advertisements that comprise the D'Arcy Collection, a gift to the University from D'Arcy Masius Benton & Bowles advertising agency.

Of course, countless artifacts of the suburban lifestyle at mid-century remain extant. Kinescopes of television shows and especially situation comedies, motion pictures, magazines and novels, sociological studies of the era, photo albums and biographies tell the story quite well. Although lifestyles have radically changed, the communities —the homes, the shops, and workplaces—still stand. Why, then, is this set of Chicago Tribune advertisements worthy of consideration? The campaign stands out for the way it depicted its audience, its voice, and for the advertising appeals that the newspapers used to motivate potential readers. It tells us how a powerful newspaper pictured its readers and this insight may help explain the relationship between modern newspapers and their readers today .

Pop sociologists of the 1950s talked about the need for belongingness, the sense of alienation and isolation that characterized suburban women. This study will argue that the Tribune newspaper campaign exploited these feelings in picture and word. There was a certain transparency in the psychological ploys that the Tribune campaign used that strongly suggest they were intentionally employing the social science of the era. At the same time, the Tribune photographs portray these suburban readers with a plaintive honesty that may have exceeded their intentions. This study will employ (a) ethnographic content analysis to identify these themes in the advertising copy and (b) proxemic photographic analysis to validate visual observations about the people depicted in the ads. A discussion of these methods follows this introduction.

The women in these ads prospered in a post-war culture that is hard to recognize today. In The Organization Man (1956), William H. Whyte, Jr. provided a rich, ironic inquiry into this culture and found that social utility was the core of their belief system. Whyte's book, a New York Times best seller for nearly a year, brought world attention to Park Forest, a Levitt-town -style prefabricated planned community on Chicago's far south side. It is a certainty that the promotion staff of the Tribune knew about the book and the notions that Whyte and others were expounding. The Tribune reviewed the book in 1956 and serialized an abridgment of it in 1957.

Whyte believed that no generation had been as well equipped, psychologically as well as technically, to cope with the intricacies of vast organizations. None were as adaptable to the constant shifts in environment that organization life would demand of them. The ads depict the women surrounded by their children and, we now know, this young generation would prove far less resilient to the vicissitudes of corporate life. Where the Organization Wife (and she was principally a wife and mother) would sublimate her individuality to the group and would try to belong to her suburban community, her children —and perhaps her grandchildren — would rather sacrifice domestic stability and community ethos for individual career success.

In The Lonely Crowd: a Study of the Changing American Character (1950), David Riesman described how middle class life nurtures a culture in which the individual is other-directed rather than inner directed. Individuals rely upon the group, rather than themselves, to set their values. Whyte agreed with Riesman and criticized the impact of this stance arguing that the 1950s suburbanite saw conformity to the system as essentially benevolent. Following De Tocqueville's dictum that, "The more equal social conditions become, the more men display this reciprocal disposition to oblige each other." [1] Whyte warned that suburbanites who acted in concert with others for good reasons only made the tyranny of social pressure more powerful by compounding its impact. In the advertising, campaign, the newspaper is portrayed as another channel for socialization in the life of the reader.

In the 1950s, advertising began to speak to middle class Americans in psychological terms that would resonate with their values. Advertisers found the new medium of television could create images that would resonate more strongly than ad copy alone. In their own self-promotional campaigns, newspapers rarely used image advertising to win over readers. Typically, they stuck to the benefits of the product. Ads to garner readers would promote new comics and columnists, a topical special series or a holiday feature. When compared with other ads, the Chicago Tribune broke new ground by offering the paper as a cure for a psycho-social malady.

Media System Dependency

The aim of the advertisements fits well within Media System Dependency theory. In that theory, information resources controlled by the media create dependency relationships at all levels of modern society; these relations account for the media system's central role(s) in the organization of personal, group and social (community) life. Through media system dependency, we can better understand why mass communication has become so necessary to understand, act and even play in our complex, multi-dimensional world.

---

[1] Democracy in America. Edited by J. P. Mayer. A new translation by George Lawrence. (Garden City, N.Y., Doubleday 1969)

In explaining the theory, DeFleur and Ball-Rokeach divide human behavior into the need into the need for self-understanding, self or action orientation and solitary play and the need for social understanding, interaction action and social play. As they describe it:

> *Social understanding* dependencies develop when individuals utilize media information resources to comprehend and interpret people, people and cultures of the present, past or future. *Self-understanding* refers to media relations that expand or maintain individuals' capacities to interpret their own beliefs, behavior, self-concepts, or personalities. Central to the orientation dependencies are questions of behavior. *Action orientation* refers to a multitude of ways in which individuals establish dependency relations with the media to guide their own behavior. *Interaction orientation* dependencies require that the object of action be one or more persons. When individuals glean media information about the kinds of behaviors that are appropriate or effective in dealing with their personal relationships or with occupants of social or professional positions. [It will be seen that the *Tribune* campaign is primarily action-oriented.] Finally, the same personal versus social distinction is made with types of play dependencies. *Solitary play* dependency refers to the instances when the aesthetics, enjoyment, stimulation or relaxation properties of the media itself are the attraction. In *social play*, in contrast, the dependency relationship is based upon the capacity of the media to provide content that stimulates play between people. . . (DeFleur and Ball-Rokeach, 1989)

They also provide a graphic to describe the typology:

	Understanding	Orientation	Play
Self	Self-understanding: learning about oneself and growing as a person	Action orientation: deciding what to buy, how to dress, or how to stay slim	Solitary play: relaxing when alone or having something to do by oneself
Social	Social-understanding: knowing about the world or community	Interaction orientation: getting hints on how to handle new or difficult situations	Social play: going to a movie or listening to music with family or friends

The Tribune campaign:

Some 200 of the 4,400 ads in the D'Arcy collection come from the Chicago Tribune. The Chicago Tribune promotional department was formally established in the 1910s and was always one of the most sophisticated in the nation. During the 1900s, they were one of the first newspapers to recruit their own team of comic-strip artists and they would syndicate these features. In the early 1920s, they ran an 8-page new car section. Most other newspapers would not attempt such a move until after World War II. In the 1930s, they formed a special research unit called the Sociology Department that examined circulation distribution and new business opportunities. They were one of the first newspapers to run ads in specific trade magazines, e.g., restaurant and home builders' magazines, to recruit advertising.

This particular advertising campaign ran in the spring and summer of 1958, right when children were heading back to school and non-working mothers began to have time on their hands. It is the ad design that unifies the eight advertisements of the campaign; in almost every one, a real women (not a professional model) is photographed in her home surrounded by her children. The woman is always looking toward the camera. The copy is set off by a headline in which the woman is quoted talking about the Tribune and relating it in some way to children.

- *Loneliness.* The first ad in the series does not follow these specifications, but it sets the tone and the mood. The headline asks, "Are you ready to scream from loneliness?" The woman in the photo is wistfully peeking out her window at the outside world.
- *Mrs. Armstrong.*. A smiling woman is shown leaning, propping up her infant in a crib. She declares, "Having my first baby might have been quite different if I hadn't read the Trib."
- *Mrs. Bohentin.* The second ad is the only one that shows the newspaper. The smiling woman is shown on the couch with her daughter on one side and her two boys, in ties, on the other. Her baby sits on top of the newspaper which is draped on her lap. She declares, "Reading the Trib is as much a part of my day as is washing dishes or cooking."

- *Mrs. Gonwa*. Similarly, the third ad also shows a woman on a couch holding an album-sized book while two of her six children cuddle on her lap. The older children perch over the couch and look at the book. She declares, "That extra nudge I need to get going in the morning is the Chicago Tribune."
- *Mrs. Lechowski*. The fourth ad shows a medium close-up of a woman standing behind the bars of a playpen. Her daughter stands in the playpen while she cradles the baby. She confides, "If you could listen in when we talk over the day's problems, you'd know why we take the Tribune."
- *Mrs. Kammerer*. The fifth ad shows a woman kneeling, holding her older son while her infant sits in a child's rocking chair. She declares, "I never thought I'd read a newspaper three times a day as I do the Tribune.
- *Mrs. Savage* .The sixth ad features one large picture of a smiling woman in a house dress protectively clutching an infant. Below this are two smaller pictures of the woman watching, with her infant on her lap, as her two older children play the piano and clip articles out of the paper. The woman, a Mrs. Melvin R. Schreiber of Homewood Illinois, declares, "After the children have gone to school, I relax with the Chicago Tribune."
- *Mrs. Schreiber* .The seventh ad features one large picture of a smiling woman in a house dress protectively clutching an infant. Below this are two smaller pictures of the woman watching, with her infant on her lap, as her two older children play the piano and clip articles out of the paper. The woman, a Mrs. Melvin R. Schreiber of Homewood Illinois, declares, "After the children have gone to school, I relax with the Chicago Tribune."
- *Mrs. Tullis*. The eighth ad, shows a woman on a couch surrounded by her five children. The children range in age from 11 months to 5 years. She declares, "I got the Tribune habit when I was having my first child."

Methods:

In Qualitative Media Analysis (1996), David Altheide proposes a method of ethnographic content analysis that allows the meaning and pattern of studied documents to emerge during the course of analysis. While other methods of content analysis depend solely upon correlation, Altheide blends in expert observation to elevate the textual content and *context* of messages. This new form of ethnographic content analysis (a) recognizes the importance of the 'active' audience in determining the meaning of messages; (b) offers the opportunity to measure multiple document forms and (c) most important, allows for meaning to emerge while the protocol for content coding is reinterpreted and refined.

According to Edward T. Hall, "proxemics is the study of man's transactions as he perceives and uses intimate, personal, social and public space in various settings while following out-of-awareness dictates of cultural paradigms. . . The camera, coupled with a detailed notation system, proved to be the best available means for collecting raw proxemic texts."(Hall, 1974) That is, proxemics offers the best method for analyzing photographs as texts. While proxemic analysis permits both auditory and olfactory coding, this study will be confined to images.

Ethnographic Content Analysis

Qualitative Content Analysis or Ethnographic Content Analysis (ECA) requires keeping detailed notes of the researchers' participation during the analytical process as well as the field observation. The results of these additions places the expert observer in the driver's seat. As Altheide explains it:

> The major tact of Quantitative Content Analysis (QCA) is to verify or confirm hypothesized relationships rather than discover new or emerging patterns. Indeed the protocols are usually constructed through operational definitions of concepts to obtain enumerative data for purposes of measurement. (Krippendorff, 1978) . . .
>
> Ethnographic content analysis is also oriented to documenting and understanding meaning, as well as verifying theoretical relationships. A major difference however, is the reflexive and highly interactive nature of the investigator, concepts, data collection, and analysis. Unlike in QCA, in which the protocol is the instrument, the investigator is continually central in ECA, although protocols may be used in later phases of the research. . .

BEST COPY AVAILABLE

> ECA follows a recursive and reflexive movement between concept development-sampling-data, collection data, coding data and analysis interpretation. The aim is to be systematic and analytic but not rigid. Categories and variables initially guide the study, but others are allowed and expected to emerge throughout the study, including an orientation toward constant discovery and constant comparison of relevant situations, settings, images, meanings, and nuances (Berg, 1989; Glaser & Strauss, 1967). To this end, ECA involves focusing on and collecting numerical data rather than follow the positivist convention of QCA of forcing the latter into predefined categories of the former. ECA is oriented to check and supplement as well as supplant prior theoretical claims. (Altheide, pp. 16-17)

Altheide's insistence on an admission of participation in content analysis acknowledges the presence of the investigator in research design in a way that adds methodological rigor to the process. It helps us find new questions and new answers. ECA has been used to study television shows, newspapers, electronic documents and news magazines. Altheide describes eleven separate steps in the ECA method. The steps of ECA, as Altheide describes them, are printed in bold type. The first six steps amount to pretesting of the protocol or research categories and questions.

1. Define the specific problem to be investigated:

The Chicago Tribune spoke to women readers about using the newspaper to combat loneliness and to help them live their lives more effectively. How do the women pictured regard the newspaper in their lives? What columns or sections of the newspaper do they read? Is the newspaper spoken of as a reflection of, what Whyte calls, the Social Ethos of the suburbs. If so, what words are used to evoke this Ethos?

2. Become familiar with the process and context of the information source. Explore possible documents of information.

The investigator has cataloged 4,400 different newspaper self-promotion ads. The investigator has also worked in a newspaper promotion department and, for that matter, was a child in the Chicago suburbs during the period under scrutiny. The ads forms the sample frame from which a selection has been made.

3. Become familiar with several (6-10) examples of relevant documents noting particularly the format. Select a unit of analysis (e.g. each article) which may change.

The last four steps of data analysis allow for more refinement of the conceptual frame based on extreme and typical examples drawn from the findings.

9. Perform data analysis, including conceptual refinement and data coding . Read data and notes repeatedly and thoroughly.

10. Compare and contrast extremes and key differences within each category or item . Make textual notes. Write brief summaries or overviews of data for each item.

11. Combine the brief summaries with an example of the typical case as well as the extremes. Illustrate with examples of the protocols for each case.

12. Integrate the findings with your interpretation and key findings in another draft.

Proxemics

Proxemic observations can be made along 19 different dimensions. This study will confine itself to ten of these: the situational frame, posture, body orientation, lateral displacement of bodies (extended arms, facing each other etc.), body distance and implicit change, gesture, expression or affect, eye behavior, and bodily involvement. (Hall, 1974)

Limitations:

Hall admits that proxemics is a complex science because Americans are not used to measuring context that involves the researcher in determining interactions on 19 different scales. Contexts differ over space and time, over the frame of activity and over the relationship that the subjects have for each other. Observers have a sensory bias in terms of what they see and what they regard as important within certain culturally specific dimensions. (Hall, 1974) Altheide does not discuss limitations in the same way but there are strong correspondences to bias in ethnographic analysis.

Findings:

Proxemics

Hall cites Roger Barker's work as presenting the importance of **the situational frame.** Both Hall and Barker argue that the setting, as one aspect of context, is inextricably linked with behavior and that given a particular context, an individual chooses (unconsciously)

which one of a number of behavioral repertoires is appropriate. Hall goes on to argue that situational frames constitute the smallest complete components of culture. (Barker, 1968; Hall, 1974) In this series of ads, we see women and their children. However, the situational frame of posing women with their children, and the choices that either the photographer chose and the women accepted place the women on a rough par with their offspring.

Just as Sherlock Holmes found a clue in the dogs that didn't bark, it is the absence of something important that tells much about these photographs. Although they are mentioned occasionally in the advertising copy, husbands or fathers do not appear in the frame. The women are portrayed with their children and not as wives or lovers. This is significant for two reasons. First, husbands served as an important outlet to the outside world. Even if one were to dismiss the fact that suburban housewives interacted with their peers (as neighbors, and occasionally as coworkers) and with adults that they met in shopping centers and in clubs, it is strange not to acknowledge husbands as emissaries to the outside world and not to see them in these family photos. The *Tribune* seems to be offering itself as a substitute for the conjugal partner. Here is a clear case of the newspaper suggesting a dependency.

Second, by placing the women on a par with the children, especially in the photos where they sit shoulder to shoulder with them, the women are, in some subtle way, made infantile. Indeed, in the case of Mrs. Gonwa, Mrs. Savage and Mrs. Tullis, it is hard to distinguish them from the children at a fast glance. In this regard, it may be of some significance that two of the other women, Mrs. Armstrong and, especially Mrs. Lechowski, are placed near cribs which seem to pen them in.

Mrs. Bohentin, Mrs. Gonwa, Mrs. Schreiber Mrs. Tullis literally can not get up because their children are holding them down. The responsibilities of large families aside, these women are stuck in their seats.

The woman pictured in the Loneliness ad and nearly all the rest are pictured without showing their legs. It is as though they can not leave the house. As will be seen, the copy makes use of many direct allusions to entrapment. While we do see Mrs. Tullis' legs, they are

hidden behind one of the children. Only Mrs. Bohentin clearly shows her legs and, curiously enough, only Mrs. Bohentin is pictured *with the newspaper on her lap.* In two of the other pictures, the women are seen holding children's storybooks. (Mrs. Bohentin may have gotten the last laugh. It appears that she is using the newspaper to shield her dress from getting wet from her baby's diaper.)

As noted the photos were also examined on nine of the nineteen dimensions suggested by Hall. (Figure 1). The dimensions that seem to show the most uniformity involve body orientation, distance and implicit change. In terms of orientation, the women are leaning, squatting or sitting. In no case are the children seen at the feet of the mother looking up at her or in any way doting upon her needs and wishes. Again, this suggests a certain subservience in her role. Of course, the women are sitting quite close to the children but there is no case when the mother is elevated or beyond the touch of the child. Finally, in all cases, the women are grasping or clasping the children to them. This suggests a protective quality, which might have been the aim of the photographer, but it also suggests a certain diminishment within the frame. The women are trying to draw themselves in and make less of themselves.

Overall, we have seen that the photographer was trying to make a statement about these women. Aside from the layout and design of these pages, and the copy, it is these photos that immediately draw the eye and articulate a statement about suburban housewives.

Ethnographic Content Analysis

Only two of the women referred to the newspaper as an aid to understanding themselves. Mrs. Gonwa, the mother of six children, said it provided the extra nudge she needed in the morning and Mrs. Lechowski said it helped when she and her friends talked over the day's problems. Most referred to the paper in terms of keeping up with the outside world, but three of them talked about how it freed them from feeling trapped or stuck at home. For instance, Mrs. Bohentin talked about a mother's confined environment and not having much chance to see the world. Mrs. Gonwa, who majored in journalism in college, said the newspaper is her only outlet to the world and that she would feel all alone if not for the Tribune. Mrs.

Savage said she longed for some adult conversation and the Tribune filled news filled the bill. DeFleur and Ball-Rokeach talk about how the media aids in understanding new problems and situations; they refer to this function as interaction orientation. A number of the women mentioned this. In fact, the Tribune's 'Loneliness' ad said "When you are new in the neighborhood, and you don't know where to turn." Later, the copy talks about "four walls that seem to close in on you " and "your new home seems like a prison." The women spoke in less bleak terms. Mrs. Armstrong found out about childbirth classes and that is why, "Having my first baby might have been quite different if I hadn't read the Trib." Mrs. Bohentin said she turns to the Tribune, "When I don't know where else to turn, when the kids come down with something." Mrs. Lechowski said that when she has the Tribune, she's "not alone with the problems we face with the children" and that "The Tribune comes up with so many answers." Mrs. Tullis talked about how, when you are an expectant mother, "there are things you hesitate to ask others." She said she didn't feel "stuck, all by myself" when she could find good advice in the Tribune.

By far, most of the women spoke about the newspaper in terms of practical action orientation. Every one spoke about grocery shopping with the Tribune. Mrs. Armstrong and Mrs. Bohentin praised the fashion news and Mrs. Schreiber spoke about "getting the most for our money" and how a Tribune subscription "pays for itself in the savings from the ads." Mrs. Savage said they found their home through the Tribune and "it helps us manage our money." The Loneliness ad, which was written by Tribune copywriters, says the Tribune can do the following for women: (1) it is packed with features to help you cook, (2) it can help you care for your children, (3) it can help redecorate your home, (4) it can help you change your hairdo and (5) it brings you the greatest selection of merchandise.

The women hardly regarded the newspaper for social or solitary play. Two of them did mention relaxing with the newspaper and their cup of coffee in the morning. They also spoke about the entertainment news in the Hedda Hopper and Tribune Ticker column. One of the women mentioned that her husband liked it for the sports pages and another said her husband was devoted to Goren's Bridge column.

Conclusions

Frankly, the double entendre headlines and the old-fashioned photos of suburban mothers saddled with so many children first attracted my attention when I saw this campaign. But there is clearly something more going on here. This campaign is unlike anything that any other newspapers were doing at the time.

As women have left the home for the workplace, as they have taken the reins in creating advertising and in critiquing advertising, we are unlikely to ever again see such blatant attempts at reducing women to household roles. The Social Ethos that Whyte and Reisman has given way as suburbia has become more diversified in lifestyle and in ethnicity. But that does not mean that other kinds of stereotyping are not being used in media self-promotion.

The topic of reaching readers with emotional appeals has reappeared recently in the newspaper industry trade press. The International Newspaper Marketing Association ran an article in the September 1996 edition of their *Ideas* magazine, "Reach Readers Emotionally by Paying Attention to Art Techniques (Stiegel and Higgins, 1996) and in their November edition, an article entitled "Intense Marketing Focus Needed Today" also talks about emotional appeals of ads (Graham, 1996). Similarly, recent articles in the Newspaper Association of America's *Prestige*, talked about "People and Product: Women, By the Numbers," (January 1996), "Catching Readers on the Run," (July/August 1996) and "Profiles of GenX Journalists and Readers (October 1996).

With newspaper publishers so focused on marketing the product, rather than on improving it and making it more useful to readers, it is instructive to measure the intentions of publishers by their advertising generally, and most especially, by the way they typify their readers. It is clear that in this 1958 campaign, the Chicago Tribune could only see their female readers within the context of very restricted bounds. The tools of ethnographic content analysis and proxemic analysis when coupled with media system dependency offer one method of measuring the intentions of media that market themselves.

Bibliography

David L. Altheide. 1996. *Qualitative Media Analysis*. Thousand Oaks, CA: Sage Publications.

"Catching Readers on the Run," July/August 1996 *Presstime*, p.7

John Collier, Jr. and Malcolm Collier. 1990. Visual *Anthropology: Photography as a Research Method*. 1990. Albuquerque: University of New Mexico Press.

Melvin DeFleur and Sandra Ball-Rokeach. 1975. *Theories of Mass Communication*. NY: David McKay. Fifth Edition.

Erving Goffman. 1979. *Gender Advertisements*.. NY: Harper.

John L. Graham November 1996 "Intense Marketing Focus Needed Today" *Ideas*, p. 18

Edward Hall. 1974. *Handbook for Proxemic Research*. Washington, DC: Society for the Anthropology of Proxemic Research.

Luigi Manca and Alessandra Manca. 1994. *Gender & Utopia in Advertising* . Lisle, IL: Procopian Press.

Paul Messaris. 1994. *Visual Literacy: Image , Mind and Reality*. Boulder: Westview Press

Paying Attention to Art Techniques "*Ideas* , p.18.

"People and Product: Women, By the Numbers," January 1996, *Presstime* , p.40

"Profiles of GenX Journalists and Readers. October 1996, *Presstime*, p. 29.

David Reisman. 1961. *The Lonely Crowd*. New Haven: Yale University Press.

Susan Sontag. 1977. *On Photography*. NY: Anchor Books.

Colleen Stiegel and Shaun O'L. Higgins September, 1996, "Reach Readers Emotionally by

Jon Wagner. ed. *Images of Formation: Still Photography in the Social Sciences*. 1979 Beverly Hills: Sage Publications.

William H. Whyte, Jr. 1956. *The Organization Man*. NY: Simon and Schuster.

			Proxemic Analysis						
		body	lateral	body	implicit		expression	eye	bodily
	posture	orientation	displacement	distance	change	gesture	or affect	behavior	involvement
Armstrong	lean	7	one set of arms e	contact/elbows extend	opening	move arms	9	8	6
Bohentin	sit upright	5	one arm extended	arm extended	closing	fingers, feet	9	9	7
Gonwa	sit slouched	6	one arm extended	contact	closing	hands	7	4	7
Lechowski	stand	7	one arm extended	elbow extend	closing	head	5	7	7
Loneliness	stand		one arm extended		opening	arms legs	3	1	
Kammerer	squat	7	shoulders overlap	very close	closing	head nod	8	5	6
Savage	sit	6	shoulders overlap	close	no change	none	5	7	1
Schreiber	sit	7	one arm extended	arms extend contact	closing	fingers	9	8	8
Tullis	sits up with legs crossed	4,5			opening		7	9	7

"I got the Tribune [illegible] when I was having my first child"

"Reading the Trib is as much a part of my day as is washing dishes or cooking"

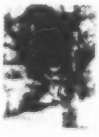
Tullis

Chicago Tribune

"I never thought I'd read a newspaper three times a day as I do the Tribune"

Bohentin

"That extra radio I need to get going in the morning is the Chicago Tribune"



Chicago Tribune

Kammerer

Gonwa

BEST COPY AVAILABLE

The Flapper in the Art of John Held, Jr.:

Modernity, Post-Feminism, and the Meaning of Women's Bodies

in 1920s Magazine Cover Illustration

Carolyn L. Kitch
Assistant Professor

The Medill School of Journalism
Northwestern University
1845 Sheridan Road
Evanston, Illinois 60208

A paper presented to the Visual Communication Division
of the Association for Education in Journalism and Mass Communication
at the 1997 Annual Conference in Chicago, Ill.

The Flapper in the Art of John Held, Jr.:
Modernity, Post-Feminism, and the Meaning of Women's Bodies
in 1920s Magazine Cover Illustration

Abstract

In the 1920s, the "flapper"--a symbol, then and now, of the "Jazz Age"--was closely associated with the magazine illustration of John Held, Jr. An examination of this imagery considers women's representation as a primary site for the intersection of early-twentieth-century feminism, modernism, and consumerism. It suggests that--during a pivotal decade in both women's history and mass-media history--the progressive cultural construct of the "New Woman" became commodified and contained in the flapper.

81

The Flapper in the Art of John Held, Jr.:

Modernity, Post-Feminism, and the Meaning of Women's Bodies

in 1920s Magazine Cover Illustration

In his memoirs, magazine humorist Corey Ford remembered the 1920s in terms of its popular culture: "Fitzgerald christened it the Jazz Age, but John Held, Jr. set its styles and manners. His angular and scantily clad flapper was . . . the symbol of our moral revolution . . . . So sedulously did we ape his caricatures that they lost their satiric point and came to be a documentary record of our times."[1]

In his time and in later decades, illustrator John Held, Jr. was credited with creating the definitive image of the "flapper," a tall, thin, cartoonish young woman preoccupied with dancing, drinking, and necking.[2] Throughout the 1920s, Held's flapper--usually accompanied by a gawky boy or a squat older man--appeared on the covers of (and inside) national magazines, especially the humor publication *Life*.[3]

In actuality, this visual symbol represented the looks and lifestyle of only some middle-class youth, yet she quickly came to stand for larger ideas. "By the early 1920s," writes Held biographer Shelley Armitage, "his flapper was an aesthetic ideal as a symbol of cultural change"; she stood for "what was free, spontaneous, and bold about a culture in flux."[4]

The fact that ideas about cultural change were encoded in the body of a woman is significant, offering insights into American notions during this era about

womanhood, about modernity, and about mass media. By the 1920s, the "New Woman," initially a political construct that signified real advances for women, had become largely trivialized in the flapper. This symbol appeared widely throughout popular culture of the decade, not only in Held's drawings, but also in the movies and in novels. Moreover, she was more than a symbol: young women dressed and acted in imitation of this new ideal, and the flapper became a subject of debate in journalistic media.

This paper examines John Held's illustrations as, to borrow John Fiske's term, a "cultural resource" from a complex era that saw both a backlash against feminism and the maturing of mass culture.[5] It reads these images as texts within a public discourse about progress and as sites at which consumerist and patriarchal ideologies intersected. The analysis begins with a description of the Held flapper, offering specific examples, and then considers two cultural uses of this image during the 1920s: its function as a symbol of modernism; and its deployment in order to commodify American women's new "freedom."

The Image

The ideal of a tall, svelte, ornamental woman had appeared in American popular culture as early as 1907, when Florenz Ziegfeld's towering "Ziegfeld Girls" first paraded down staircases on the Broadway stage.[6] By the 1920s, this elongated body image, which connoted sophistication and smartness, was evident as well in fashion illustrations, advertisements, and even depictions of actual women, such as

the actress Gertrude Lawrence and the aviatrix Amelia Earhart (see Figures 1, 2, 3, and 4).[7] Fast-living, smart-talking, worldly, sleekly-thin young girls appeared in film (actress Clara Bow, nicknamed "the It girl," became famous for playing such characters); on the covers of sheet music for songs featuring "gals" and "hot mammas" (Figure 5); and in the fiction of F. Scott Fitzgerald.[8]

The flapper lived for leisure and never seemed to lack for money. Writing about a hypothetical flapper in a 1925 issue of *The New Republic*, Bruce Bliven described his subject as a 19-year-old girl with short hair, wearing a "brief" dress and a great deal of makeup. Imagining her setting, he saw her "as she strolls across the lawn of her parents' suburban home, having just put the car away after driving sixty miles in two hours." This girl was triumphantly "free," making her own daring choices about appearance, attitude, and behavior "while from the sidelines to which he has been relegated mere man is vouchsafed permission only to pipe a feeble Hurrah!"[9]

The flappers John Held, Jr. drew for American magazine covers were a part of this larger representational phenomenon, yet their style and tone were distinctive. Held used the tall, thin body type--but transformed it from chic to ridiculous. Held's flapper was a cartoon, a caricature of the New Woman who was neither sophisticated nor smart; instead, she was self-absorbed and silly. She was flat-chested and skinny, made up mainly of arms and legs, and she often had an equally ridiculous-looking male in tow. She wore a sleeveless dress with a short skirt and roll-top stockings that were usually falling down.

On most of the covers, the flapper's setting and behavior were explained by a title, a clever phrase Held drew into each illustration. These words were a form of (to use Roland Barthes' term) anchorage that limited the possible meanings of the visual message, that helped viewers "to choose the correct level of perception . . . to focus not simply [their] gaze but also [their] understanding" of magazine illustration.[10]

Some of Held's flappers were college students who cheered at football games and whose boyfriends wore coonskin coats and carried hip flasks. Though his depiction of girls in college reflected an actual upward trend in women's enrollment[11], Held's campus flapper, whom he sometimes called "Betty Co-Ed," was not the studious type. Jack Shuttlesworth, a contemporary of Held, described her as a girl with "fingers snapping, feet jumping, troubled by nothing very much except yesterday's hangover and tomorrow's heavy date."[12]

Nor was she shy. She was loud, as suggested by the cheering flapper on the November 19, 1925 *Life* cover titled "Hold 'Em," a phrase that no doubt referred to both the football bame in progress and the girl's sagging stockings (Figure 6). She was immodest, like the girl shown lowering her bathing strap to check for sunburn in front of her snickering male companion on another *Life* cover titled "The Girl Who Gave Him the Cold Shoulder" (Figure 7).

She was at loose ends without a boyfriend, like "The Thinker," on *Life*'s March 18, 1926 cover, all dressed up with no place to go--and nothing better to think about than "Love Confessions" (Figure 8). Yet when she had a beau, she was usually in

charge of the relationship. It was the flapper who seemed to be doing the proposing in the July 29, 1926 *Life* barnyard love scene, with its title, "The Laughing Stock," presumably labeling the young man in the picture (Figure 9). She was certainly the one winning the lover's quarrel, titled "Where the Blue Begins" (under the man's eye!), on the April 7, 1923 cover of *Judge* (Figure 10). Though positioned below her boyfriend on the golf course, the flapper in "One Up, Two to Play" on *Judge*'s June 30, 1923 cover also seemed to be directing the action, considering the expression on the young man's face (Figure 11, top left).

Other Held flappers were young society women. Some exhibited crude taste, such as the girl about to swig whiskey from a bottle in "The Lass Who Loved a Sailor" on *Life*'s June 24, 1926 cover (Figure 11, bottom right). Most of the society flappers, however, preferred champagne to gin and fit F. Scott's Fitzgerald's description of his own female characters: "lovely and expensive and about nineteen."[13] Despite the elite lifestyles suggested by their clothing and settings, these women were socially daring, smoking ("She Left Home Under a Cloud," Figure 11, top right), bobbing their hair ("The Long and the Short of It," Figure 12), and dancing to jazz (no title, August 1927; Figure 13).

Some society flappers, like those in "Sitting Pretty" (Figure 14) and "The Girl Who Went for a Ride in a Balloon" (Figure 15), were posed in sexually suggestive though awkward ways. Like their teenage counterparts, these women could be physically abusive to men ("She Missed the Boat," Figure 16). And they could be golddiggers, the clear implication of the titles and scenes of two *Life* covers showing

flappers with older, shorter, bald men: "She Missed the Boat" and "Teaching Old Dogs New Tricks" (Figure 17).

On a surface (but not insignificant) level, the latter two illustrations made an unflattering suggestion about young society women's motives in the 1920s. On another level, they offer examples of the symbolic use of a woman's image to represent modernity itself: these illustrations show us the twentieth century (a tall, attractive woman in a revealing, modern frock) overpowering the nineteenth century (a short, bald, overweight, aging man in a tuxedo). This interpretation is one of several ways Held's flapper--in her body image and in her activities--can be seen as a symbol of change in the larger American culture.

The Flapper as a Symbol of Modernity

Film historian Sumiko Higashi, writing about the 1920s, argues that "the image of womanhood upheld by society is a cultural byproduct of its mores and profoundly resistant to change"; therefore, "whenever change occurs, society is experiencing certain transformations, as it was during World War I and its aftermath."[14]

The body of Held's flapper was a far cry from that of the Victorian matron (or her more attractive daughter, the Victorian girl) depicted in late-nineteenth-century popular culture. The latter ideal had been represented by the female images drawn by Charles Dana Gibson for *Collier's* and *Life* magazines during the 1890s and early 1900s. The "Gibson Girl" embodied the Victorian-American values of sobriety and

propriety, as well as specific moral prescriptions for middle-class women: purity, piety, domesticity, and submissiveness, the qualities historian Barbara Welter defined as comprising the nineteenth-century "cult of true womanhood."[15]

Held's flapper's appearance suggested just the opposite inclinations. The illustrator himself contrasted these two generations in an illustration that appeared inside a 1926 issue of *Life*, with the title "Thirty Years of Progress, 1896-1926" (Figure 18).[16] Kenneth Yellis considered this set of images as symbolic of the new century in America: "The Gibson girl was the embodiment of stability. The flapper's aesthetic ideal was motion, [and] her characteristics were intensity, energy, volatility. . . . She refused to recognize the traditional moral code of American civilization, while the Gibson girl had been its guardian."[17]

The flapper further suggested a rejection of more recent events, a change in national mood after World War I--what one historian later characterized as "an immense, all-pervading disillusionment."[18] Describing American men's reaction to the war's end, Malcolm Cowley wrote, "we all got drunk. We had come through, we were still alive . . . . We danced in the streets . . . with bottles of champagne, fell asleep somewhere. On the next day, after we got over our hangovers, we didn't know what to do, so we got drunk."[19] As they danced, necked, and drank bootleg gin, Held's flappers offered comic versions of the dissipation that characterized Cowley's memoirs and much American literature of the period.[20]

Held's flapper also was stylistically linked to trends in modern art. The fact that she was a cartoon rather than a faithful rendition of a real woman separated

Held's art from both the idealized images of upper-class women in nineteenth-century painting and the realistic depictions of working-class women in the work of the "Ashcan realists" of the Progressive era .[21] Held's girls seemed to float in space, fitting cultural studies scholar Martin Pumphrey's description of the flapper: "Young, with no future or past . . . angular and poised yet always in motion, she [was] an ironic realization of modernist principles."[22]

Three characteristics of modern art, as discussed by Roland Marchand, could be seen in Held's flapper. One was "the license [modern art] gave to 'expressive distortion,' to exaggeration even to the point of caricature." Unrealistic tallness was one aspect of this characteristic. In 1920s advertising, the modern woman "was immediately recognizable in her elongated neck, stiletto fingers, and towering height . . . . The proportions of some women in the tableaus suggested a height of over nine feet . . . . Their pointed feet and toes appeared to have emerged fresh from a pencil sharpener." This description fit many of Held's flappers (see, especially, Figures 14 and 16). The tall twentieth-century woman was as much as symbol of modernity as the skyscraper.[23]

The flapper's remarkable thinness further contributed to her unreal look. Stuart Ewen includes this female body ideal among various types of evidence supporting his argument that modernism was based on immateriality and was signified by imagery "freed from the liabilities of substance." The "streamlined" flapper, he writes, looked as if "she might transcend the force of gravity, dissolving into the weightless ecstasy of some modernistic frenzy."[24]

The second characteristic of modern art evident in Held's flapper was the stylistic elimination of details, a technique that became a way of "respond[ing] to the demands of the age for a fast tempo of reading based on 'effortless simplicity' in the type."[25] This simplified image--what Jane Feuer would call a "flat character," in which larger messages could be inscribed and read--enabled viewers to recognize a familiar symbol and to quickly decode the ideas that symbol represented.[26]

Finally, Held conveyed motion through the use of diagonal lines in his flapper illustrations, a third quality of modern art. Movement was suggested by the flapper's frequently-leaning body, by her bent legs and arms ("flapping" out), by her slimness, and by the jagged hem or swaying skirt of her outfit.[27] All of these visual cues "fostered the image of the woman in actual or impending motion--the woman on the move."[28] So did her activities: cheering (Figure 7), fighting (Figures 10 and 16), falling through the air (Figure 16), and dancing (Figures 13 and 17). The angularity of the flapper in Figure 18, contrasted with the prim posture of the Gibson Girl, offers a particularly clear example of this phenomenon.

Part of the kinetic nature of modern images was an illusion of newness and novelty, a feeling of constant change, an offering of "the latest mode"[29]--a technique in verbal and visual popular culture of the 1920s that was used not only to connote the new century, but also to sell products in a new mass-market culture. It was particularly in this sense that the idea of a New Woman, and images representing that idea, became yet another aspect of modernism, called into service as "triggers for consumer behavior."[30]

The Flapper as Commodification of the New Woman

The transformation of women's representation during the 1920s was not merely the result of commercial imperatives. It was also a form of cultural backlash against the (real) political gains made and the (generally illusory) threat to the social order posed by American women as the Victorian era gave way to modernity.

During the first two decades of the twentieth century, the role and status of women in the United States had undergone widespread discussion and some profound transformations. It was during these years that Progressive-era reform offered a chance for middle-class women to become involved in the public sphere in large numbers; that women made the final push for, and achieved, suffrage; that the term "feminist" first came into use, by women and by the press; that women entered the workforce, including new professions, in significant numbers; that the American popularity of the works of Freud prompted a public acknowledgement of women's sexuality; and that a new birth-control movement enabled women to express that sexuality more freely and safely.

To some extent, the flapper ideal confirmed these changes. In her history of women's cultural representation, Lois Banner notes that this image conveyed multiple and conflicting "behavior messages" for women.[11] Indeed, the flapper has been a contested image among historians who have studied both image and reality in the women's lives. Some scholars[12] have admired the flapper's outrageousness and irreverence and called her a revolutionary figure, the first mass-media depiction of a woman openly expressing her sexuality in an even power relationship with men.[13]

Furthermore, many young women living in the 1920s chose the flapper label as a way of declaring their rejection of social conventions. One, Ruth Hooper, defended the term in a 1922 *New York Times* article titled "Flapping Not Repented Of." She explained that "a flapper is proud of her nerve . . . . She is shameless, selfish and honest." Such a girl, Hooper warned young men, "will never make you a hatband or knit a necktie, but she'll drive you from the station hot summer nights in her own little sport car. She'll don knickers and go skiing with you; or if it happens to be summer time, swimming; she'll dive as well as you, perhaps better; she'll dance as long as you care to . . . ."[34]

This was certainly a description of an independent, confident young woman. Yet the New Woman who became a flapper was depicted--by Hooper as well as by Held--as an equal with men only in the world of leisure. Another *New York Times* piece, a tongue-in-cheek essay published in 1929, claimed that the flapper had earned "the feminine right to equal representation in such hitherto masculine fields of endeavor as smoking and drinking, swearing, petting and disturbing the community peace."[35]

Sumiko Higashi argues that, in film as well as magazine illustration, "[t]he flapper's youthful, spirited and impulsive manner suggested a party without end."[36] Contrasting the flapper with the image of female Progressive reformers of the previous generation, Mary P. Ryan has noted that

> The slim figure of the new woman seemed designed
> for play and pleasure, energetic self-expression rather

> than altruistic service to mankind. . . . It was old-fashioned to gather with one's own sex and pledge mutual dedication to solace the poor children of slums and factories. The flapper symbolized a solipsistic, hedonistic, and privated femininity, a gay abandonment of social housekeeping, women's organizations, and dogged professionalism.[37]

Through the flapper image, the "new" freedom of American women was thus symbolically reduced to showing a lot of leg and public necking--essentially, exhibitionistic fun. In her history of courtship in America, Beth Bailey has noted that by the 1920s, such public displays of sexuality were far from shocking; they were, in fact, expected behavior among middle-class youth.[38] Furthermore, as Lois Banner has observed, Held's illustrations portrayed women's sexuality as comical, as a prank they played on unsuspecting men.

At the same time, the flapper's body itself--flat-chested, hipless, skinny--posed little real sexual threat. Surveying American "trends in feminine beauty," sociologist Allan Mazur notes that "[f]lapper beauty was remarkable for the near absence of female sexual characteristics."[39]

As a cultural ideal, Held's flapper was, in fact, not a woman at all, but an adolescent. She had none of the responsibilities of adulthood--she was never shown caring for children or working at a job. Her name itself suggested a teenager: "The term 'flapper,'" explains Kenneth Yellis, "originated in England as a description of

girls of the awkward age . . . . meant literally . . . a girl who flapped had not yet reached mature, dignified womanhood."[40]

It is significant that this particular shift in women's body-image ideals occurred during the decade that began with the passage of the Nineteenth Amendment granting women's suffrage and that saw the introduction (by self-identified "feminists") of the Equal Rights Amendment. Communication scholars Margaret Hawkins and Thomas Nakayama analyzed the flapper image against this political backdrop and saw it as a form of backlash against feminist gains. "Understood as a cultural struggle within patriarchy at the time," they wrote, "this idealized female body [was] . . . a crucial weapon in disempowering women by idealizing the body of a girl."[41]

Historian Elaine Tyler May agrees. The flapper's "childish aura," she writes, suggested that even in the 1920s, "women remained in a state of dependency on men, consistent with their traditional positions in both the economy and the home. They could gain the attention of men, but not from a stance of autonomy. The apparent freedom of the flapper, then, led directly to the protective support of a man."[42]

In this light, Held's illustration titled "Thirty Years of Progress, 1896-1926" (Figure 18) can be seen as supremely ironic. His flapper poked fun at women's actual advances while offering a "surface impresssion of the liberated woman"--an image which, Hawkins and Nakayama argue, was crucial to the formation "of advertising as an industry and ideological force, with women centered as the focal point of consumerism."[43]

Historians Rayna Rapp and Ellen Ross make a similar case, maintaining that, during the 1920s, "themes of female independence" disappeared from the political sphere but "resurfac[ed] in advertising" and media that contained advertising.[14] To be useful as selling tools, women's body images and lifestyles had to *seem* new, yet any revolutionary tendencies of American women themselves--who, according to advertising industry research, made 85 percent of product-purchase decisions[15]--needed to be channeled into spending (not sexual, professional, or political) impulses.

The flapper image played an important role in communicating to American women such prescriptions for consumption. Martin Pumphrey argues that the flapper's preoccupation with appearance and entertainment made her the perfect pitchperson for new industries that revolved around leisure and personal pleasure:

> [she] required clothes for innumerable occasions: travelling, shopping, lunching, weddings, outdoor amusements, tea, dining, theatre, dancing . . . . Constantly in movement, the Flapper required cars, trains and planes at her disposal. Enjoying sport and the healthy life, she needed outfits for driving, golf and tennis. Looking for a suntan in summer and skiing in winter, she took advantage of the summer cruises and winter holidays beng offered by the new tour companies. Seeking nightlife, she frequented places of luxury and expense.[16]

The flapper promoted a range of consumer products and services, but her main work was selling fashion. Held's illustrations did a large part of this work; indeed, so closely were flapper fashions associated with him that F. Scott Fitzgerald called them "John Held Clothes."[47]

The flapper uniform--which itself "came to symbolize the 'new woman's' independence," Higashi notes[48]--included not only the short, narrow, sleeveless dress, but also a combination girdle and bra that bound the breasts and minimized the hips; roll-top, silk stockings; a handbag (the streamlined shift could not accommodate functional pockets); and cosmetics. The sales of hose and cosmetics alone betweeen 1923 and 1925 prompted the advertising firm N. W. Ayer to take flappers seriously. In an industry ad, Ayer executives noted that "tomorrow these young women will be home executives . . . . They will buy enormous quantities of every conceivable kind of staple merchandise."[49]

Sociologists Robert and Helen Lynd, in *Middletown*, their 1929 study of a representative American town, found evidence that flapper imagery had indeed spurred national consumption. Since the turn of the century, they reported, women's "skirts have shortened from the ground to the knee and the lower limbs have been emphasized by sheer silk stockings; more of the arms and neck are habitually exposed."[50]

Thanks to the new ready-to-wear clothing industry and the wide availability of consumer credit in the 1920s,[51] this outfit, which began as a costume for urban elites, became affordable to middle-class women across the country. Flapper dresses

were available for mail-order through the Sears-Roebuck catalog beginning in 1923, and retail stores sold them in the fashion industry's first standardized sizes.[52]

The vertical dress style and the new sizing system bolstered two other growing national industries, the weight-loss business and the tobacco industry. Then as now, smoking was portrayed in advertising as a gesture of independence: "In the 1920s," writes Michael Schudson, "cigarettes came to be a personal and social marker for 'the new woman,' a sign of divorce from the past and inclusion in the group of the new, young, and liberated."[53] But tobacco companies also created a new female market by promoting their product as a diet aid, as a (to quote a Lucky Strike ad of the day) "new-day and common-sense way to keep a slender, fashionable figure."[54]

Ultimately, the flapper was a saleswoman. And in this sense, she became a prime example of how feminist notions about freedom and choice were co-opted by commercial culture--of how the New Woman in American culture became more profitable than political--during the 1920s.

Conclusion

In the flapper, epitomized by the cartoonish girls drawn by John Held, Jr., issues of feminism, modernism, and commerce intersected in complex ways. So too did image and reality intersect: women's body images in popular art carried prescriptions for the behavior of actual American women, and that behavior further defined the image. An examination of Held's flapper supports Raymond Williams' argument that art is a part, not merely a "reflection," of any particular era, that it is

inside rather than outside history, and that until we know a society's imagery, "we cannot really claim to know the society."[55]

Though initially associated with the upper-class, urban phenomenon of the "Jazz Age," Held's flapper quickly became a national icon, distributed via mass-market magazines to middle-class Americans across the United States. On one level, this symbol incorporated larger messages: a modernist rejection of Victorian social, moral, and aesthetic values; a dismissal of women's sexual and political power; and an affirmation of pleasure-seeking through consumption. On another level, she quite literally showed millions of Americans, many of them women, what to buy in order to have a modern look and lifestyle.

The flapper was a product of her time and society, and she existed in popular culture beyond the magazine world. John Held, Jr. did not invent the flapper. Yet he gave her a unique visual form that was widely recognized in his time and that remains a powerful figure in American memory and cultural history. The emergence and deployment of this image during the 1920s offer cultural historians valuable perspectives on American values and identity, on the loss of women's newfound political and social agency in this era, and on the role of mass-media representations of women's bodies in twentieth-century commercial culture.

Credits and sources for illustrations

Figure 1. (Clockwise from upper left:) Fashion illustration in *Harper's Bazaar*, 1925, reprinted in Jane Trahey, *Harper's Bazaar: 100 Years of the American Female*, 120; two advertisements (for advertising design itself) that appeared in *Advertising and Selling*, April 18, 1929 and March 24, 1926, reprinted in Marchand, *Advertising the American Dream*, 147, 143; silverware advertisement from the *Saturday Evening Post*, May 9, 1931, reprinted in Marchand, 182.

Figure 2. Advertisement, *Saturday Evening Post*, April 9, 1927, reprinted in Marchand, 201.

Figure 3. Advertisement, *Saturday Evening Post*, April 22, 1930, reprinted in Marchand, 183.

Figure 4. Photo, Amelia Earhart (late 1920s), reprinted in Trahey, 40.

Figure 5. Sheet music: "Danger! (Look Out for that Gal!)" and "Red Hot Mamma" (full citations in text).

Figure 6. John Held, Jr., "Hold 'Em," *Life*, November 19, 1925, reprinted in Armitage, *John Held, Jr.: Illustrator of the Jazz Age*, 42.

Figure 7. Held, "The Girl Who Gave Him the Cold Shoulder," *Life*, August 26, 1926, reprinted in John Held, Jr., *The Most of John Held, Jr.* (Brattleboro, VT: The Stephen Greene Press, 1972), 74.

Figure 8. Held, "The Thinker," *Life*, March 18, 1926, reprinted in Armitage, 106-107.

Figure 9. Held, "The Laughing Stock," *Life*, July 29, 1926, reprinted in Armitage, 106-107.

Figure 10. Held, "Where the Blue Begins," *Judge*, April 7, 1923, reprinted in Armitage, 106-107.

Figure 11. Held, (clockwise from upper left:) "One Up, Two to Play," *Judge*, June 30, 1923; "She Left Home Under a Cloud," *Life*, n. d.; "The Lass Who Loved a Sailor," *Life*, June 24, 1926; "The Girl Who Gave Him the Cold Shoulder," *Life*, August 26, 1926; all reprinted in Shuttlesworth, "John Held, Jr. and his World," 32.

Figure 12. Held, "The Long and the Short of It." *Life*, December 18, 1924. reprinted in Held, 46.

Figure 13. Held, [no title] *McClure's*, August 1927, reprinted in Walt Reed. *The Illustrator in America, 1900-1960s* (New York: Reinhold, 1966), 93.

Figure 14. Held, "Sitting Pretty," *Life*, March 31, 1927, reprinted in Meyer, *America's Great Illustrators*, 297.

Figure 15. Held, "The Girl Who Went for a Ride in a Balloon," *Life*, January 14, 1926, reprinted in Armitage, 86.

Figure 16. Held, "She Missed the Boat," *Life*, April 28, 1927, reprinted in Held, 63.

Figure 17. Held, "Teaching Old Dogs New Tricks," *Life*, February 18, 1926, reprinted in Armitage, cover.

Figure 18. Held, "Thirty Years of Progress 1896-1926," *Life* (n. d.), reprinted in Meyer, 296.

Notes

1. Corey Ford, *The Time of Laughter* (Boston: Little, Brown, 1967), 4-6.

2. Frederick J. Hoffman, *The Twenties: American Writing in the Postwar Decade*, rev. ed. (New York: The Free Press, 1965); Susan E. Meyer, *America's Great Illustrators* (New York: Harry N. Abrams), 1978; Richard Merkin, Introduction, *The Jazz Age, as Seen through the Eyes of Ralph Barton, Miguel Covarrubias, and John Held, Jr.* [exhibition program, 25 September to 10 November 1968] (Providence: Museum of Art, Rhode Island School of Design, 1968); Carl J. Weinhardt, "Introduction: The Rise of the Mormon Kid," in *The Most of John Held, Jr.* (Brattleboro, VT: The Stephen Greene Press, 1972), 12-19.

3. This was "the old" *Life*, unconnected with the feature-photography magazine that debuted in 1936 under the same title. Held's illustrations also appeared in *Judge*, *Puck*, *Liberty*, *Cosmopolitan* (then a general-interest magazine), *Smart Set*, *Vanity Fair*, *Harper's Bazaar*, and *The New Yorker*.

4. Shelley Armitage, *John Held, Jr.: Illustrator of the Jazz Age* (Syracuse, NY: Syracuse University Press, 1987), 84.

5. John Fiske, "Popular Discrimination," in *Modernity and Mass Culture*, ed. John Naremore and Patrick Brantlinger (Bloomington: Indiana University Press, 1991), 106.

6. Randolph Carter, *The World of Flo Ziegfeld* (New York: Praeger, 1974).

7. Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), 143, 147, 182, 183, 201; Jane Trahey, *Harper's Bazaar: 100 Years of the American Female* (New York: Random House, 1967), 40, 120.

8. Leslie Fishbein, "*Dancing Mothers* (1926): Flappers, Mothers, Freud, and Freedom," *Women's Studies* 12 (1986), 241-250; F. Scott Fitzgerald, *Bernice Bobs Her Hair and Other Stories* (New York: Signet, 1996) [originally published in *Flappers and Philosophers* (New York, 1920)]; Sumiko Higashi, *Virgins, Vamps, and Flappers: The American Silent Movie Heroine* (Brattleboro, VT: Eden Press Women's Publications, 1978); Hoffman, *The Twenties*; Charles O'Flynn and Eddie Kilfeather, "Danger (Look Out for That Gal!)" [sheet music] (New York: A. J. Stasny Music Co., 1928); Gilbert Wells, Bud Cooper, and Fred Rose, "Red Hot Mamma" [sheet music] (New York: Rainbow Music Corp., 1924).

9. Bruce Bliven, "Flapper Jane," *The New Republic* (9 September 1925), 65, 67.

10. Roland Barthes, "Rhetoric of the Image," in *Image Music Text* (New York: Hill and Wang, 1977), 39.

11. Nancy Cott, *The Grounding of Modern Feminism* (New Haven: Yale University Press, 1987), 40.

12. Jack Shuttlesworth, "John Held, Jr. and his World," *American Quarterly* (August 1965), 30.

13. Quoted in Hoffman, *The Twenties*, 110. Hoffman cites F. Scott Fitzgerald, "Descriptions of Girls," *Notebooks*.

14. Higashi, *Virgins, Vamps, and Flappers*, 11.

15. Barbara Welter, "The Cult of True Womanhood," in *Dimity Convictions* (Athens, OH: Ohio University Press, 1976), 21.

16. Reprinted in Meyer, *America's Great Illustrators*, 296.

17. Kenneth A. Yellis, "Prosperity's Child: Some Thoughts on the Flapper." *American Quarterly* 21 (Spring 1969), 44.

18. Bruce Catton, "The Restless Decade," *American Heritage* (August 1965), 6.

19. Malcolm Cowley, "Memoranda of a Decade," *American Heritage* (August 1965), 33.

20. Hoffman, *The Twenties*.

21. Meyer, *America's Great Illustrators*; Weinhardt, "Introduction: The Rise of the Mormon Kid." Held's career itself was a rejection of previous values and standards in artistic production. Unlike painters and even other illustrators who studied in the nineteenth century, Held had almost no formal training (he briefly took lessons from the sculptor Mahonri Young).

22. Martin Pumphrey, "The Flapper, the Housewife and the Making of Modernity," *Cultural Studies* 1 (May 1987), 186.

23. Roland Marchand, *Advertising the American Dream*, 146, 182, 155. According to fashion economist Paul Mystrom, only 17 percent of American women were thin and over 5' 3" tall (cited in Marchand, 184).

24. Stuart Ewen, *All Consuming Images: The Politics of Style in Contemporary Culture* (New York: Basic Books), 183, 174.

25. Marchand, *Advertising the American Dream*, 146.

26. Jane Feuer, "Genre Study and Television," in *Channels of Discourse, Reassembled: Television and Contemporary Criticism*, 2nd ed., ed. Robert C. Allen (Chapel Hill: University of North Carolina Press, 1992), 154-155.

27. Armitage, *John Held, Jr.: Illustrator of the Jazz Age*.

28. Marchand, *Advertising the American Dream*, 184.

29. Marchand, *Advertising the American Dream*, 142.

30. Pumphrey, "The Flapper, the Housewife and the Making of Modernity," 184.

31. Lois Banner, *American Beauty* (New York: Knopf, 1983), 279.

32. For example, Armitage, *John Held, Jr.: Illustrator of the Jazz Age*; Meyer, *America's Great Illustrators*; and Yellis, "Prosperity's Child: Some Thoughts on the Flapper."

33. Another openly sexual female image, the "vamp," had appeared a decade earlier in film--popularized especially by the actress Theda Bara--but was portrayed as dangerous and vengeful (Higashi, *Virgins, Vamps, and Flappers*).

34. Ruth Hooper, "Flapping Not Repented Of." *The New York Times* (16 July 1922), 13.

35. Cited in George E. Mowry, *The Twenties: Fords, Flappers & Fanatics* (Englewood Cliffs, NJ: Prentice-Hall, 1963), 186.

36. Higashi, *Virgins, Vamps, and Flappers*, 111.

37. Mary P. Ryan, *Womanhood in America: From Colonial Times to the Present* (New York: New Viewpoints, 1975), 256-257.

38. Beth L. Bailey, *From Front Porch to Back Seat: Courtship in Twentieth-Century America* (Baltimore: The Johns Hopkins University Press, 1988), 80-81.

39. Allan Mazur, "U. S. Trends in Feminine Beauty and Overadaptation." *The Journal of Sex Research* 22, no. 3 (August 1986), 289.

40. Yellis, "Prosperity's Child: Some Thoughts on the Flapper," 49.

41. Margaret A. Hawkins and Thomas K. Nakayama, "Discourse on Women's Bodies: Advertising in the 1920s," in *Constructing and Reconstructing Gender: The*

Links among Communication, Language, and Gender, ed. Linda A. M. Perry, Lynn H. Turner, and Helen M. Sterk (Albany: State University of New York Press, 1992), 62.

42. Elaine Tyler May, *Great Expectations: Marriage and Divorce in Post-Victorian America* (Chicago: University of Chicago Press, 1980), 65.

43. Hawkins and Nakayama, "Discourse on Women's Bodies," 61.

44. Rayna Rapp and Ellen Ross, "The Twenties' Backlash: Compulsory Heterosexuality, the Consumer Family, and the Waning of Feminism," in *Class Race and Sex: The Dynamics of Control*, ed. Amy Swerdlow and Hanna Lessinger (Boston: G. K. Hall, 1983), 104.

45. Marchand, *Advertising the American Dream*, 66.

46. Pumphrey, "The Flapper, the Housewife and the Making of Modernity," 186.

47. F. Scott Fitzgerald, "Echoes of the Jazz Age," *Scribner's* 90, no. 5 (November 1931), 464.

48. Higashi, *Virgins, Vamps, and Flappers*, 125.

49. Elizabeth Stevenson, *Babbitts and Bohemians: The American 1920s* (New York: Macmillan, 1967), 142.

50. Robert S. Lynd & Helen M. Lynd, *Middletown: A Study in American Culture* (New York: Harcourt, Brace and Company, 1929), 159.

51. Joan Jacobs Brumberg, *Fasting Girls: The Emergence of Anorexia Nervosa as a Modern Disease* (Cambridge: Harvard University Press, 1988); Robert S. McElvaine, *The Great Depression: America, 1929-1941* (New York: Times Books, 1984).

52. Mazur, "U. S. Trends in Feminine Beauty and Overadaptation"; Brumberg, *Fasting Girls*.

53. Michael Schudson, *Advertising, The Uneasy Persuasion* (New York: Basic Books, 1984), 196.

54. Quoted in Hawkins and Nakayama, "Discourse on Women's Bodies," 67.

55. Raymond Williams, *The Long Revolution* (London: Chatto & Windus, 1961), 46.

FIGURE 1

BEST COPY AVAILABLE

FIGURE 2

6.30. *The American dream meant belonging to the right class. To live the dream was to spend one's life in evening clothes. See also Figs. 4.10, 10.3.*

BEST COPY AVAILABLE

FIGURE 3

6.14. The "smartness" of actress Gertrude Lawrence, like that of the Oneida hostess (Fig. 6.13), was revealed in bodily proportions that suggested a height of at least eight feet.

BEST COPY AVAILABLE

FIGURE 4

BEST COPY AVAILABLE

FIGURE 1

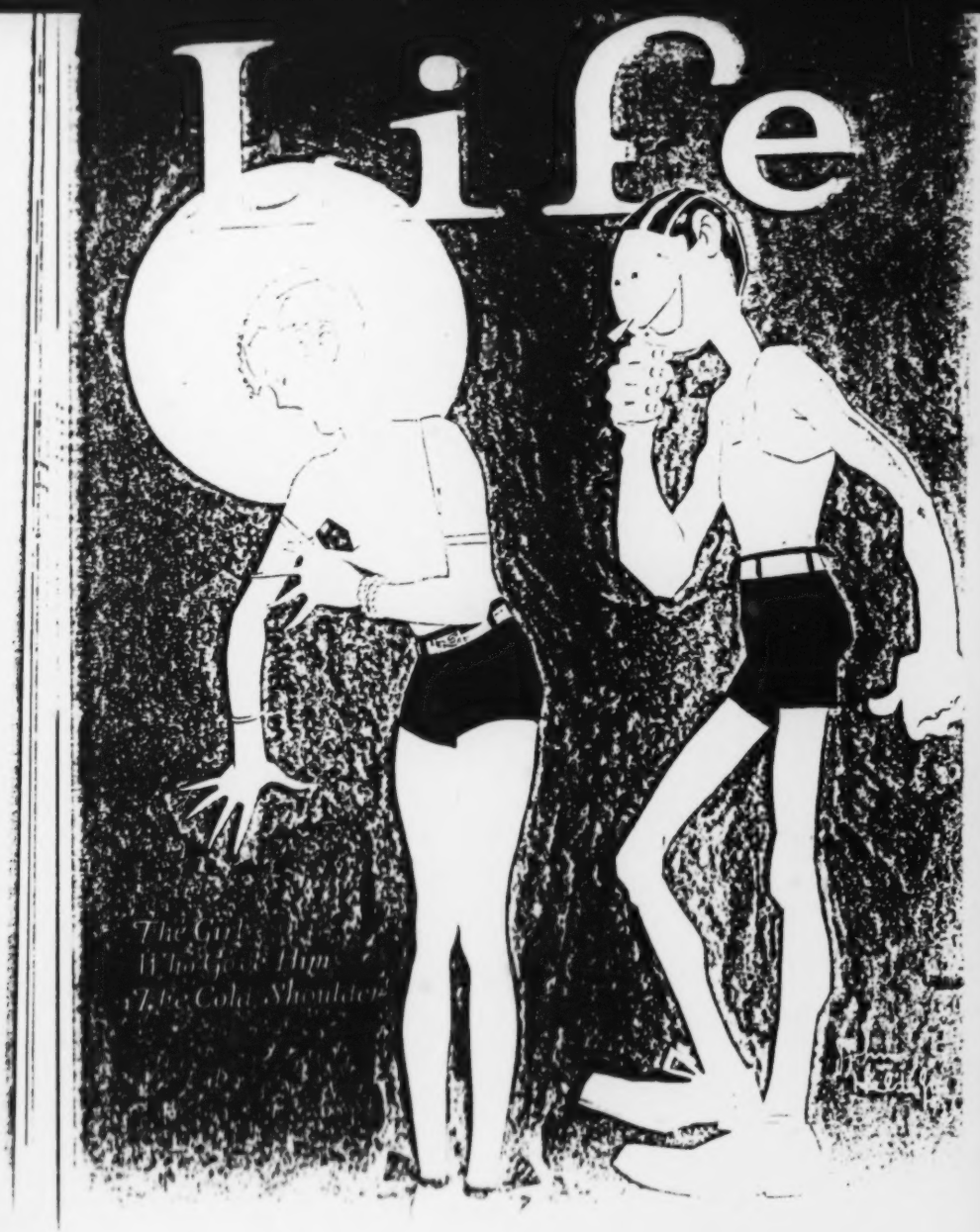
BEST COPY AVAILABLE

FIGURE 6

Hold 'Em. *Life*. November 19, 1925. Permission of JB&R, Inc.

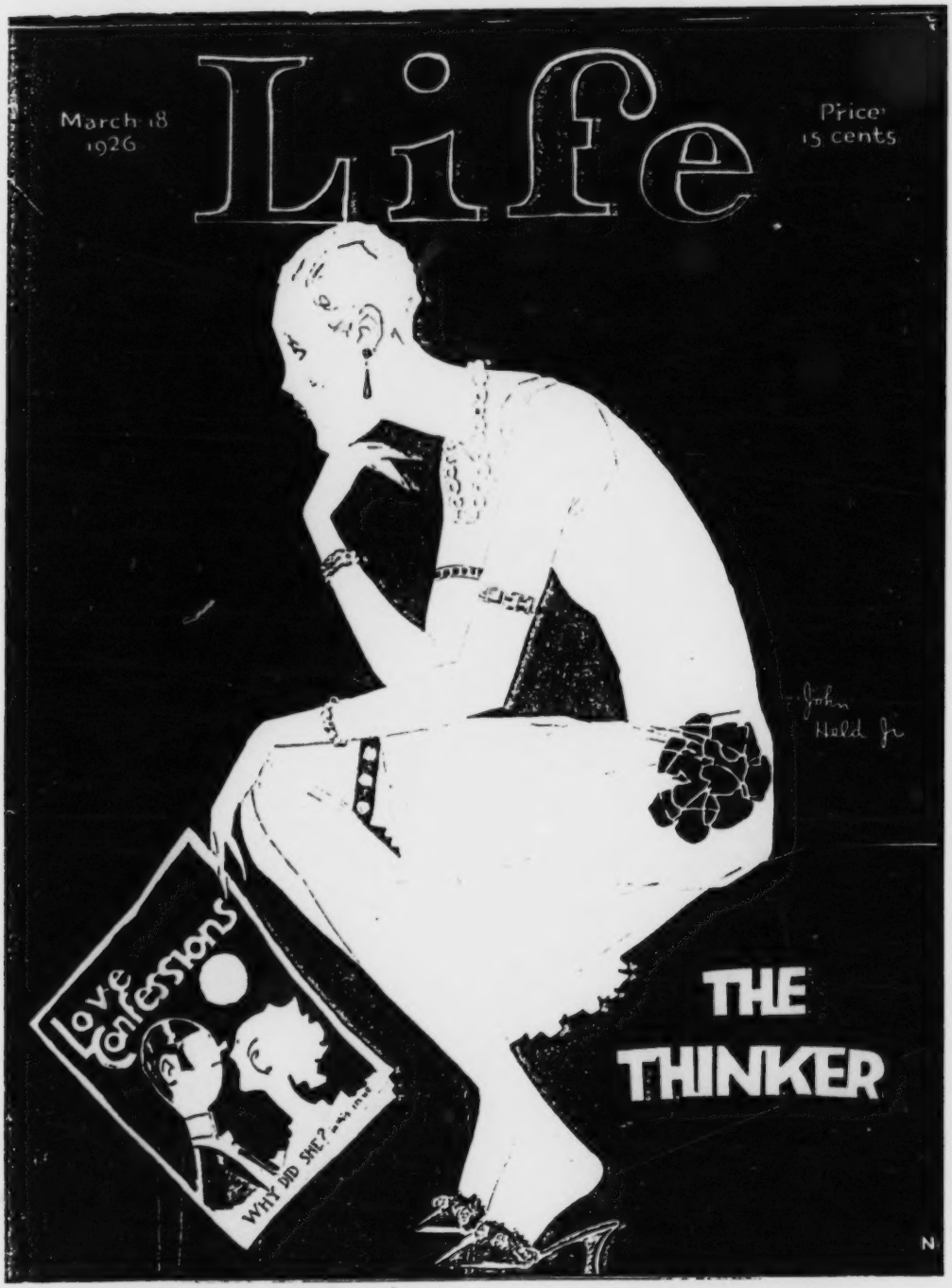
BEST COPY AVAILABLE

FIGURE 7



BEST COPY AVAILABLE

FIGURE 8



The Thinker. *Life*, March 18, 1926. Courtesy of Bill Blackbeard , The San Francisco Academy of Comic Art.

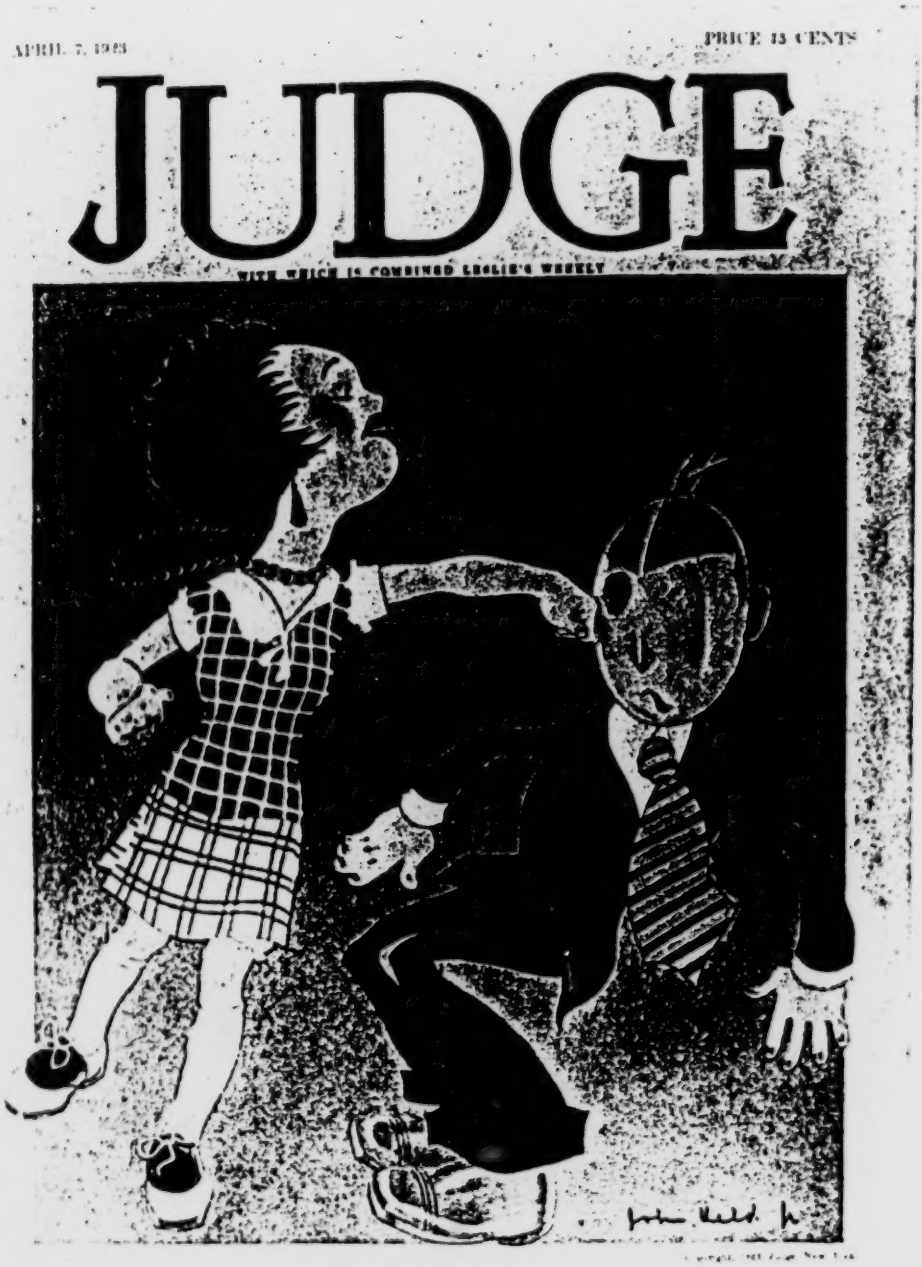
BEST COPY AVAILABLE

FIGURE 9

The Laughing Stock. *Life*, July 29, 1926. Courtesy of Bill Blackbeard, The San Francisco Academy of Comic Art.

BEST COPY AVAILABLE

FIGURE 10

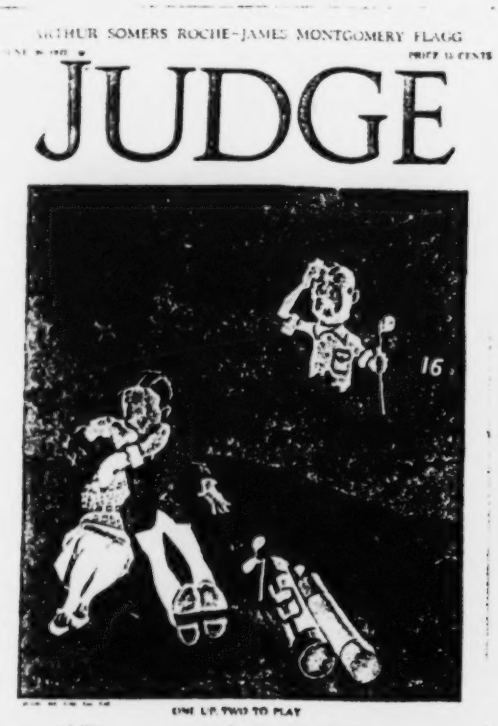


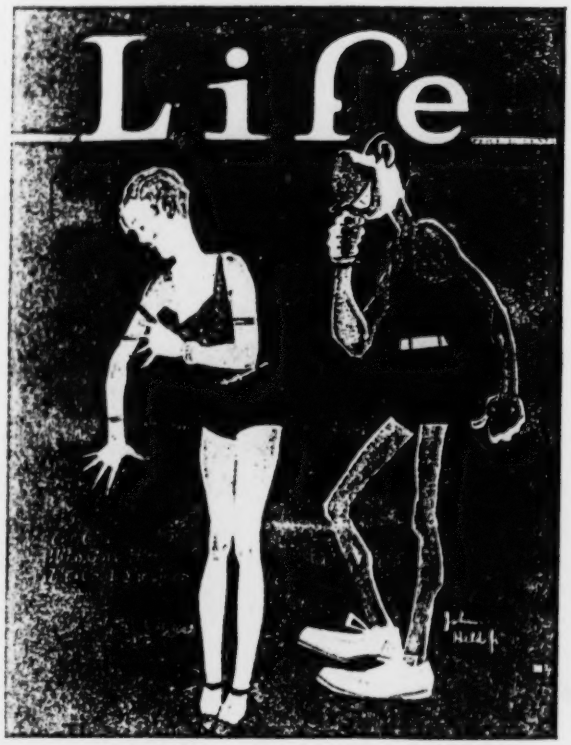
"Where the Blue Begins"

Where the Blue Begins. April 7, 1923. Permission of JB&R, Inc.

BEST COPY AVAILABLE

FIGURE 11

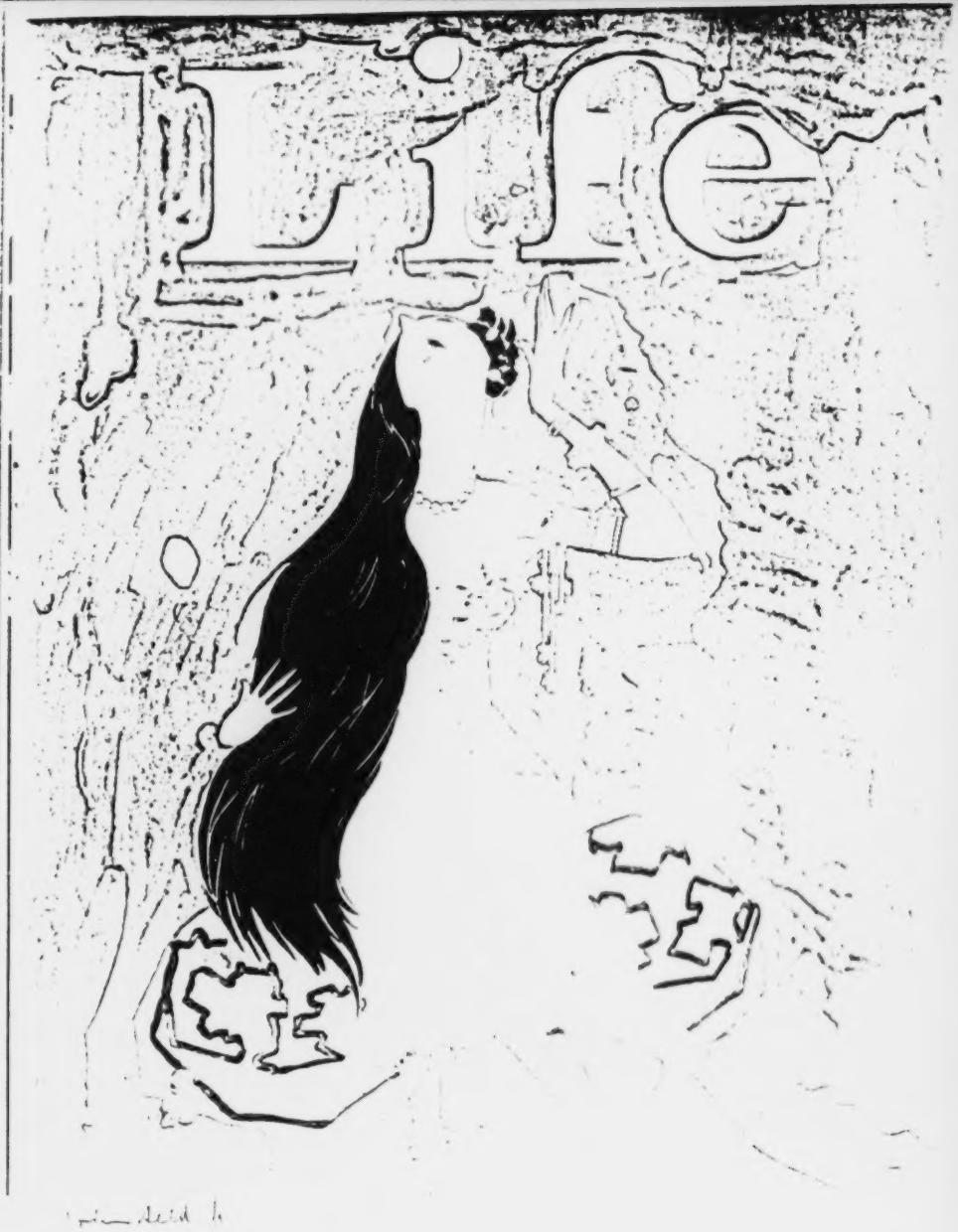




Though Held's flappers made a bolder showing than real-life girls, her covers did portray profound changes in the mores of American women.

BEST COPY AVAILABLE

FIGURE 12



BEST COPY AVAILABLE

FIGURE 13

COSMO HAMILTON'S *New Serial* "Daughters of Folly"

McCLURE'S

BEST COPY AVAILABLE

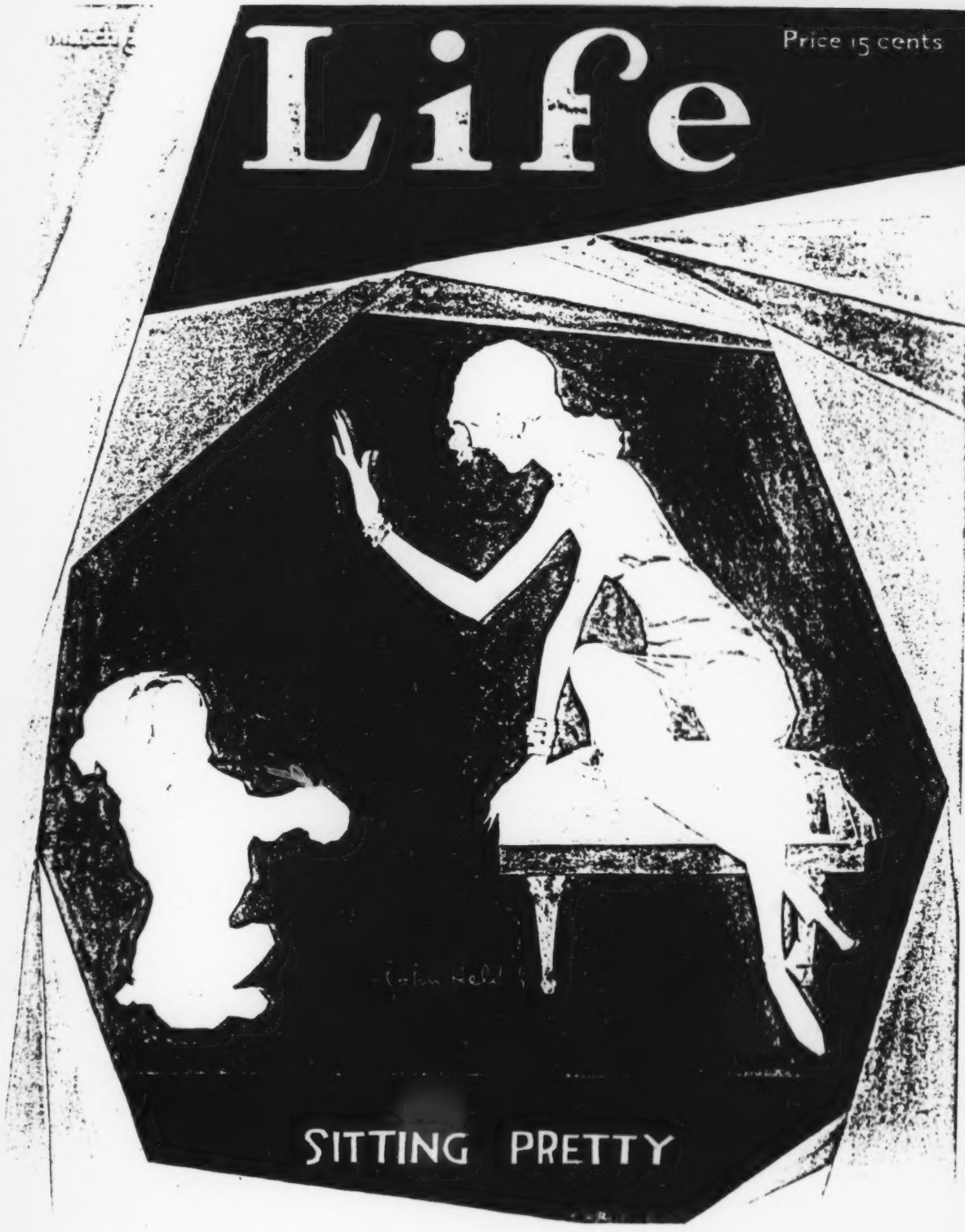
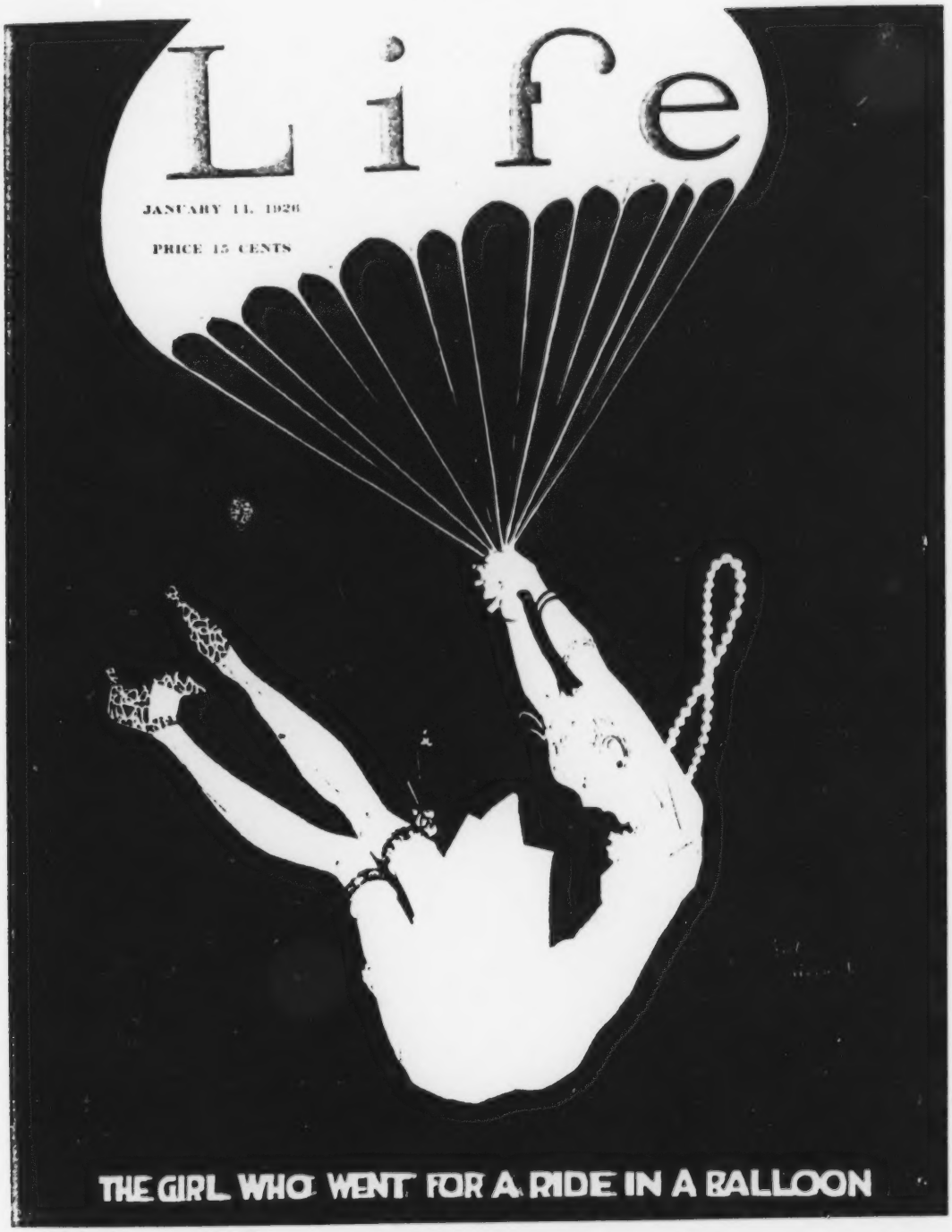


FIGURE 14

BEST COPY AVAILABLE

FIGURE 15



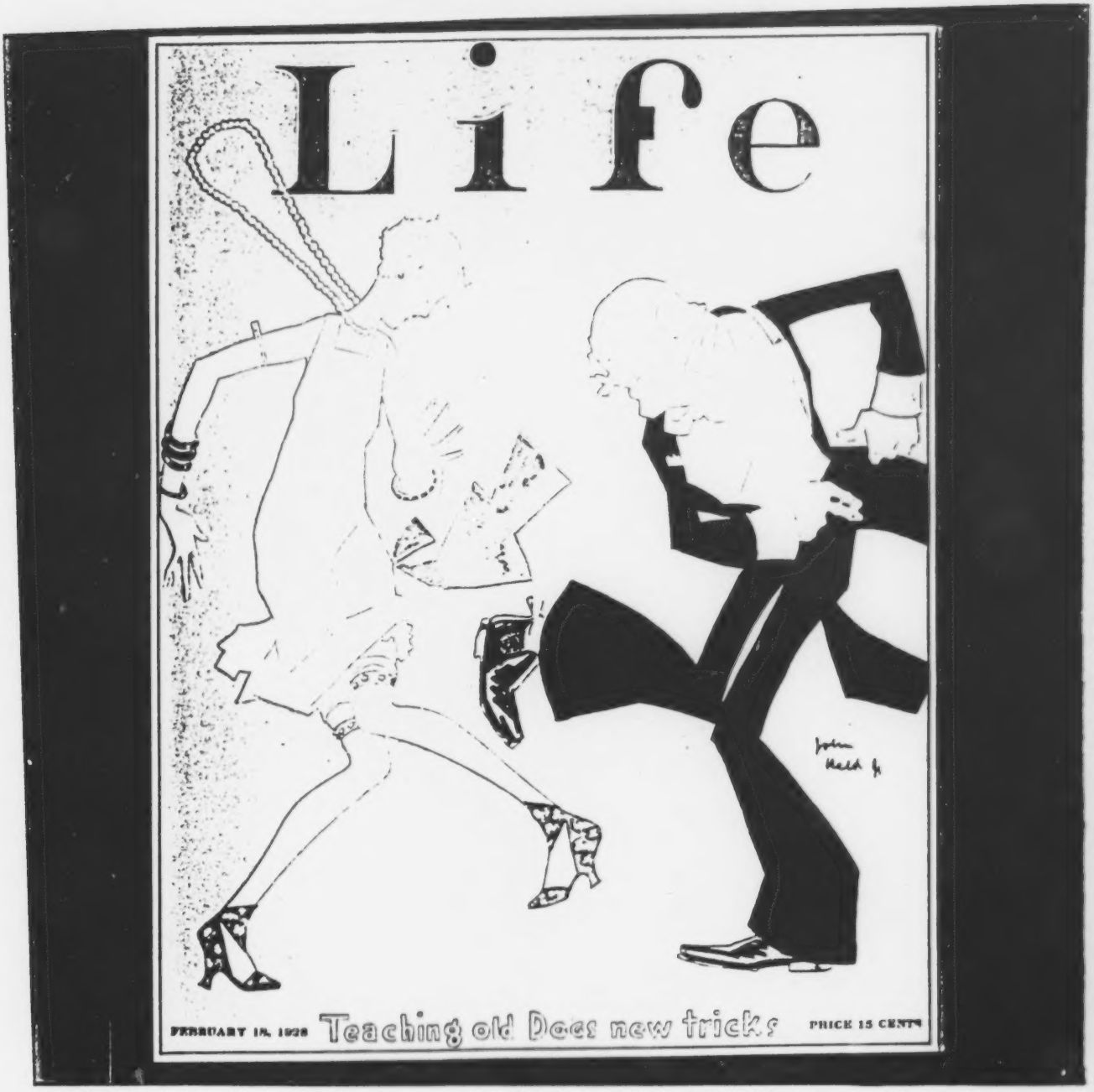
The Girl Who Went for a Ride in a Balloon. *Life*, January 14, 1926. Permission of Illustration House, Inc.

BEST COPY AVAILABLE

FIGURE 16

BEST COPY AVAILABLE

FIGURE 17



BEST COPY AVAILABLE

FIGURE 18

27. "Thirty Years of Progress 1890-1920"

BEST COPY AVAILABLE

Political Endorsements In Daily Newspapers and Photographic Coverage of Candidates in the 1995 Louisiana Gubernatorial Campaign

A Research Paper
Presented to the Visual Communication Division
1997 AEJMC National Convention
Chicago, Illinois
August 2, 1997

by John Mark King, Assistant Professor
221 Journalism Building
Manship School of Mass Communication
Louisiana State University
Baton Rouge, LA 70803
Office: 504/388-2216
FAX: 504/388-2125
e-mail: jking@unix1.sncc.lsu.edu

Political Endorsements In Daily Newspapers and Photographic Coverage of Candidates in the 1995 Louisiana Gubernatorial Campaign

by John Mark King, Assistant Professor,
Manship School of Mass Communication, Louisiana State University

75 Word Abstract

Daily newspaper endorsements in the 1995 Louisiana gubernatorial campaign and candidate photographs were examined. Independent variables were endorsements in the primary election and runoff election. Dependent variables were photo size, color/black and white, fold location, placement and candidate depiction.

Results from 10 hypotheses showed that endorsed candidates in the runoff election were more likely to have photos published on front pages and more likely to have favorable photos published than candidates not endorsed by newspapers.

Background

Voters in a political campaign depend on a variety of mass media organizations to inform them of issues, events, trends and analysis. Traditionally, voters have turned to newspapers to provide them with recommendations about voting choices. Newspapers, through their published endorsements and editorials, sometimes give readers insight and direction about whom to vote for in a campaign.

Editors do appear to consider the function of editorials to be serious. A 1975 survey of 186 daily newspaper editors found that 94 percent agreed that editorials "...should provide community leadership through stands on issues"[1] and that 98 percent felt that editorials influence readers. Eighty percent of the national sample endorsed candidates at the state level.[2]

A chairman of a major journalism education program, after conducting a nationwide study of press coverage and editorials of one out of every four congressional districts in the United States, concluded that newspapers in 1981 were not doing a very good job of informing voters about choices nor issues, even though they may view editorials as having a serious function.[3] Peter Clarke noted two major criticisms, the general low quality of editorials and the affection newspapers seem to display for incumbents.

> This affection for incumbents on the editorial page is echoed by news treatment in the rest of the paper to a degree that would make you blanch. We analyzed content of those news stories paragraph by paragraph. There were between 700 and 800 news stories that we gathered from some 73 major dailies. Challengers to incumbents are simply invisible.[4]

Sixty-nine percent of 194 newspaper editors in a 1972 survey identified themselves as independents, but the author of the research also determined that many of these editors have affinities for Republican-conservative or Democratic-liberal positions.[5]

While editors seem to be largely independent in their stated political affiliation, publishers and their newspapers generally tend to endorse Republicans in presidential elections and did so from 1964 until 1992, when a majority of daily newspapers in the nation supported Clinton in that year's election.[6] In the 1996 election, Bob Dole, the Republican candidate, won the majority of endorsements.[7] In 1996, 42 percent of publishers decided endorsements; 38 percent of endorsement decisions were made by editorial boards, and editors made 28 percent of endorsement decisions.[8] Percentages of newspapers choosing not to endorse a candidate in presidential elections and the numbers of readers they serve was up in the 1996 *Editor and Publisher* poll; 69.9 percent chose not to endorse in 1996 compared to 67 percent in 1992.[9] This represents a daily circulation of 26.2 million, up from from 22.2 million in 1992 who received no direct guidance about whom to vote for in the campaign.[10] Bill Kovach, curator of the Nieman Foundation for Journalism and the former *Atlanta Journal and Constitution* editor, stated that these findings do much to dispel the myth of a liberal press. "Kovach summed up the myth as 'the difference between the people who own the newspapers and the people who work for them.'"[11]

If Clarke and Kovach are right, it would be expected that political endorsements may have some impact on how journalists cover, edit and display news about candidates during a campaign. Most research on newspaper endorsements, as outlined in the literature review below, have not focused on how newspaper endorsements may affect news coverage of political campaigns. Rather, most studies have centered on the impact of endorsements on voting. One way to begin to address the relationship between political endorsements and news coverage is to examine how newspaper endorsements may affect how photos are edited and displayed in newspapers in the coverage of a campaign.

A body of visual communication research, also outlined in the literature review, has established that use of color, placement and the size of photos may have a fairly strong impact on reader response to stories and photos. Given this body of knowledge about the impact of color, placement and size of photos on reader responses, it is important to know if newspaper endorsements have any impact on how campaign photos are used and displayed in newspapers.

The central question of this research then, is whether decisions about newspaper endorsements in campaigns, often determined by the publisher and top editors, has a corresponding relationship with the day-today use of visual images of the campaign and how they are displayed in the newspaper. Managing editors, graphics managers, page and section editors, photo editors and photographers have some choice about the images they use on campaign stories. Are these choices influenced by the political endorsements the newspaper makes? One measure which might provide some evidence of this possible unbalanced visual reporting effect is a comparison between newspaper political endorsements and use of campaign photos in terms of photo size, placement, color and selection of favorable or unfavorable photos of candidates for publication. That is the focus of this study.

Literature Review

Several scholarly articles have examined how newspaper endorsements affect voting patterns. Gregg[12] found that even though many newspapers in California claimed to be independent, 79 percent endorsed candidates of only one party, the Republican party, 76 percent or more of the time and that local endorsements were more influential on voters than state or national endorsements. McCombs[13] found that 17.5 percent of voters in a California gubernatorial race decided to vote for candidates endorsed by newspapers after exposure to the newspaper

endorsements. Hooper[14] determined that much of the variance on voting within parties in an Illinois legislative election was due to newspaper endorsement. Mason,[15] researching the same election, reported that endorsements by major newspapers in all districts on average increased votes for the endorsed candidate one standard deviation above the mean. Fulero[16] surveyed 104 voters who had written letters to the editor and found that most voters assigned more persuasive value to editorial endorsements on other voters than to themselves, suggesting a social desirability effect.

Erikson,[17] researching the 1964 presidential election in 223 nothern counties found that a Democratic endorsement from local newspapers resulted in a gain of five percentage points on average for Kennedy. In research on the 1980 presidential election, Hurd and Singletary[18] found that about five percent of 501 voters who followed the campaign in a newspaper were influenced to vote for a candidate by newspaper endorsements, but that among voters who did not read newspapers, less than one percent were influenced by endorsements. In either case, Hurd and Singletary concluded that endorsements were not likely to influence the outcome of an election.

In a study that examined the effects of multiple variables on voting, Counts[19] determined that in the 1948 presidential election, the Republican candidate's vote percentages were positively related to resident home ownership, Republican Party registration and newspaper endorsements. Newspaper endorsements were found to have had no effect for the Democratic Party candidate.

St.Dizier[20] determined, in an experimental study, that newspaper endorsements have more impact than political party affiliation when information about a candidate is minimal.

Two studies examined the effects of chain ownership and endorsements on voting. In a study of endorsements from 51 California newspapers over a 10 year period, Rystrom[21] concluded that group-owned newspapers were slightly more liberal than independent newspapers, but that

endorsements from both types of newspapers had little impact on voting. Gaziano[22] found that between 1972 and 1980, chain-owned newspapers were homogenous in their presidential endorsements.

Visual communication research has established several trends in reader response attributable to various approaches to visual display in newspapers. Color seems to be a powerful tool for attracting reader attention. Click and Stemple[23] found, in an experiment, that newspaper pages with color photos on the front page were rated statistically significantly higher on 15 of 20 evaluative semantic differential scales. The pages with color were deemed more pleasant, valuable, interesting, fair, truthful, unbiased, responsible, exciting, fresh, easy, neat, colorful, bold, powerful and modern than pages with black and white photos.

Bohle and Garcia[24] tested reader reaction to color photographs in newspaper design and found that readers' initial eye movement was almost always toward the photo at the top of the page, whether the photo was in color or black and white. After seeing the photo, readers were attracted to spot color the most, even if it was at the bottom of the page. Gilbert and Schleuder[25] concluded in an experimental study that subjects remembered color images more than black and white images and that complex photos did not require more mental effort to process. These studies suggest that candidates pictured in animated color photos may enjoy more attraction and recall than candidates pictured in black and white.

In his classic Eye Trac experimental research on color, Garcia[26] found that dominant photos attract readers to pages more than black and white photos. Forty-nine percent of readers entered the front page through a dominant color photo, 35 percent entered through a black and white lead photo. Garcia also found that initial attention to a photo on a newspaper page is also influenced by the size of the photo, especially black and white photos. The larger the photo, the

more likely it is to be processed by readers. Finally, Garcia found that 75 percent of photos are processed by readers, but only 25 percent of text is processed. This suggests that photos may have strong influences on attraction and readership.

McCombs, Mauro and Son[27] found in a survey of 350 newspaper readers that some of the best predictors of readership of news stories were location on the front page of a section, local-staff sources, topic and pictures. "News stories with a picture have higher readership than those without a picture."[28]

Wolf and Grotto[29] found that animated photos aided attention to stories, but had no effect on recall. Even mug shots, according to a study by Lain,[30] have the ability to help readers form opinions of subjects in the news. Wanta[31] concluded in a carefully-controlled experiment that dominant photos on newspaper pages may have an agenda-setting effect, increasing issue salience as size increases.

A few studies have examined election photos directly. Moriarty and Garramone[32] studied bias in newsmagazine photos during the 1984 presidential election and concluded that more photos were published of Reagan, 124, than Mondale, 87. Reagan also enjoyed more favorable coverage in photos than Mondale. Photos of Bush represented him more favorably than photos of Ferraro, but in terms of frequency, Ferraro had twice as many published photos as Bush. Overall, *Time*, *Newsweek* and *U.S. News and World Report* did publish photos of the candidates that differed in terms of frequency and favorable depiction. A similar study of the 1988 presidential election by Moriarty and Popovich[33] found that the newsmagazines tended to balance the visual coverage more than in the 1984 election. As in the first study, coding of more favorable or less favorable campaign photos was based on an analysis of activity, posture, arms, hands, eyes, expression, interaction, camera angle and portrayal.

Plaster[34] used Moriarty's methodology to examine photos from the 1992 presidential election in eight elite newspapers. Analysis of 486 campaign photos showed no statistical difference between Clinton, Bush and Perot in terms of frequency, size of photo, dominance of photo, position on the page or the timing in the campaign. However, camera angle, facial expression, arm behavior, hand behavior, setting and interacting with others all favored Clinton.

Williams[35] conducted an experiment based on an actual campaign for mayor of the City of Alton, Ill. Two weeks before the election, the local newspaper ran a story with mug shots of the five candidates. All were pictured in suits and ties, except for one of the front runners, whose published photo showed with him dressed in a casual shirt and windbreaker in an informal, outdoor setting. This candidate ended up losing the election by one-half of one percent. In the experiment conducted with persons unfamiliar with the campaign, two groups of respondents were asked to "vote" for the candidate based solely on the photographs. One group saw all five candidates dressed in suits and ties; the other group saw the published photos. The candidate who lost the election by 50 votes was raised from last place to second place by being pictured in a suit and tie in the experiment.

Interestingly, it was clear that most respondents, who also wrote comments about the men based solely on their photos, assumed that the candidates all submitted the photos themselves. This in itself could cause readers, who may assume that all mug shots are submitted to the paper by the candidates, to assign some value judgment to the candidates. In other words, readers might think that if the guy was dumb enough to give the paper such a bad photo of himself, why would he be a good mayor?

Hypotheses

As the above discussion demonstrates, the relationship between political endorsements and campaign news coverage is largely unknown. Ten hypotheses were developed to examine the relationship between campaign endorsements in newspapers and photographic coverage of candidates. Dependent variables were size of the campaign photo in square picas, whether the photo was in color or black and white, whether the photo was above or below the fold, whether the photo was on the front page/section front or on an inside page and whether the photo depicted the candidate favorably or unfavorably.

Independent variables were whether the candidate in the photo was endorsed by the paper in the primary election and whether the candidate in the photo was endorsed by the paper in the general election, termed a runoff election in Louisiana. Each hypothesis predicts that the endorsed candidate will receive better photographic coverage than candidates who were not endorsed in both the primary election and the general election.

H1: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be larger than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H2: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be in color than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H3: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be on the front page or on a section front than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H4: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be above the fold than photos of candidates

appearing in newspapers which did not endorse the pictured candidate during the primary election.

H5: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to depict the endorsed candidate favorably than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H6: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be larger than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H7: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be in color than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H8: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be on the front page or on a section front than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H9: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be above the fold than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H10: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to depict the endorsed candidate favorably than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

Method

A content analysis of 1,075 Louisiana gubernatorial campaign photos from 24 daily newspapers in Louisiana published between Sept. 1, 1995 through Nov. 18, 1995, election day, was performed. The unit of analysis was the published photo containing one or more of the 18

gubernatorial candidates. In cases where more than one candidate was pictured in the same photo, each candidate was treated as a separate photo.

Items coded included the newspaper name, publication date, name of the candidate endorsed by each paper, name of the candidate in the photo, favorable/unfavorable depiction, front/inside, above fold/below fold, black and white/color and size of photo in square picas. Two coders, a graduate student and an upper division undergraduate student majoring in mass communication at a major AEJMC accredited institution, performed the coding. Intercoder reliability, based on percentage of agreement, was measured on a test of 31 campaign photos, selected from a random week of publication. Each variable had an intercoder reliability of 1.00 except for size, which had a .97 intercoder reliability and favorable/unfavorable treatment, which had a .94 intercoder reliability. The significance level for all hypotheses was set at .05 with a 95 percent confidence interval.

Dependent variables were size (in square picas), color/black and white, fold location (above/ below), placement (front page/section front or inside page) and depiction of the candidate (favorable/unfavorable). Depiction of the candidate as favorable or unfavorable in photos was determined by using coding evaluation guidelines developed by Moriarty and Garramore[36] and refined by Moriarty and Popovich[37]. These guidelines measure activity, posture, arms, hands, eyes, expression, interaction, camera angle and portrayal of candidates in photos to arrive at a measure that is more favorable or less favorable. For example, a photo in which the candidate is gesturing or doing something is considered more favorable than a photo in which a candidate has hands at the side or at rest..

Independent variables were endorsed in primary (whether the candidate in the photo was endorsed by the newpaper in the primary election and endorsed in runoff (whether the candidate

in the photo was endorsed by the newspaper in the general election, termed a runoff election in Louisiana). These variables were constructed by matching coding of the candidate's name in the photo and coding of which candidate was endorsed by each paper. The result for each case was whether the candidate pictured in the photo had been endorsed by the paper in which the photo was published or not.

Results

> H1: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be larger than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H1 was not supported. As Table 1 shows, there was no statistically significant difference between the size of photos for candidates endorsed by the newspapers that published their photographs versus candidates who were not endorsed by the newspapers that published their photos. Candidates who were not endorsed were likely to have photos of themselves published about the same size as those who were endorsed.

Table 1: T-test of mean size of photos during the primary election in square picas

	n	Mean	Std. Dev.	Std. Error
Did not endorse	640	314.07	438.94	17.35
Did endorse	96	302.58	382.09	39

Note. N = 736, mean diff. = 11.49, t= .24, p = .41

> H2: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be in color than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

BEST COPY AVAILABLE

Table 2 shows no support for H2. The difference between the percentages of photos in color and percentages of photos in black and white did not differ between photos of candidates who were endorsed and candidates who were not endorsed by the newspapers publishing the photos. In other words, a candidate was no more likely to have his or her photo published in color if the paper publishing the photo endorsed the candidate pictured than if the paper publishing the photo did not endorse the candidate pictured. A large majority of campaign photos during the primary election, more than 80 percent, appeared in black and white.

Table 2: Chi-square test of endorsement in primary photos by color/black and white

	Color	Black and White
Did not endorse candidate in photo	105 (16.4%)	536 (83.6%)
Did endorse candidate in photo	11 (11.5%)	85 (88.5%)

Note: N= 737, Chi-Square= 1.53, df= 1, p= .11

H3: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be on the front page or on a section front than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H3 is not supported. As Table 3 indicates, candidates appearing in photos who were not endorsed by the newspapers publishing the photos were just as likely to end up on the front page/section front or on inside pages as candidates who were endorsed by the newspapers publishing the photos. Overall, most campaign photos during the primary election appeared on inside pages.

Table 3: Chi-square test of endorsement in primary photos by placement

	Front/Section Front	Inside Pages
Did not endorse candidate in photo	262 (40.9%)	379 (59.1%)
Did endorse candidate in photo	36 (37.5%)	60 (62.5%)

Note: N= 737, Chi-Square= .40, df= 1, p= .27

H4: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to be above the fold than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H4 is not supported. As Table 4 shows, whether endorsed by the newspapers publishing the photos or not, both groups of candidates were just as likely to have their photos appear above the fold or below the fold. Interestingly, 74 percent of the campaign photos appeared above the fold, suggesting that editors deem them somewhat important. Or this could simply be a convention of contemporary newspaper design which calls for placing the dominant image above the fold.

Table 4: Chi-square test of endorsement in primary photos by fold location

	Above Fold	Below Fold
Did not endorse candidate in photo	476 (74.3%)	165 (27.5%)
Did endorse candidate in photo	71 (74%)	25 (26%)

Note: N= 737, Chi-Square= .004, df= 1, p= .48

H5: Photos of candidates appearing in newspapers which endorsed that candidate during the primary election will be more likely to depict the endorsed candidate favorably than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the primary election.

H5 is not supported. Table 5 indicates that there is no significant difference between the likelihood of being depicted favorably or unfavorably based on whether the candidate in the published photographs were endorsed by the newspapers publishing the photos. Candidates who were not endorsed by the newspapers publishing the photos were just as likely to get favorable photos as candidates who were endorsed by the newspapers publishing the photos. Overall, more than 80 percent of the campaign photos depicted candidates in a favorable way.

Table 5: Chi-square test of endorsement in primary photos by depiction of candidates

	Favorable	Unfavorable
Did not endorse candidate in photo	516 (80.5%)	125 (19.5%)
Did endorse candidate in photo	82 (85.4%)	14 (14.6%)

Note: N= 737, Chi-Square= 1.32, df= 1, p= .13

> H6: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be larger than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H6 is not supported by the results in Table 6. The difference in the size of photos for the two groups is statistically significant, but the difference is not in the predicted direction. Candidates who appeared in photos in newspapers which did not endorse those candidates had photos 167 square picas larger than candidates who appeared in photos in newspapers which did endorse them.

Table 6: T-test of mean size of photos during the runoff election in square picas

	n	Mean	Std. Dev.	Std. Error
Did not endorse	271	631.38	744.11	45.2
Did endorse	67	464.36	481.71	58.85

Note. N = 338, mean diff. = 167.02, t= 1.75, p = .04

H7: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be in color than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election. H7 is clearly not supported.

Table 7 shows that there is absolutely no difference between the percentages of photos run in black and white or color for either group of candidates. Overall, however it is interesting to note that about twice as many of the photos in the runoff election were in color compared to the primary election.

Table 7: Chi-square test of endorsement in runoff photos by color/black and white

	Color	Black and White
Did not endorse candidate in photo	93 (34.3%)	178 (65.7%)
Did endorse candidate in photo	23 (34.3%)	44 (65.7%)

Note: N= 338, Chi-Square= .00, df= 1, p= .50

H8: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be on the front page or on a section front than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H8 was supported, as is evident in Table 8. As predicted, photos of candidates in newspapers in which the newspapers endorsed those candidates were more likely to be on the front page or a section front than photos of candidates not endorsed by the newspapers which published them in the runoff election.

Table 8: Chi-square test of endorsement in runoff photos by placement

	Front/Section Front	Inside Pages
Did not endorse candidate in photo	144 (53.1%)	127 (46.9%)
Did endorse candidate in photo	44 (65.7%)	23 (34.3%)

Note: N= 338, Chi-Square= 3.42, df= 1, p= <.05

H9: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to be above the fold than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H9 is not supported. Table 9 shows no significant difference between the two groups of candidates. Candidates who were pictured in newspapers which did not endorse their candidacies were just as likely to have their photographs placed above the fold as candidates who were endorsed by the newspapers publishing the photos.

Table 9: Chi-square test of endorsement in runoff photos by fold location

	Above Fold	Below Fold
Did not endorse candidate in photo	194 (71.6%)	77 (28.4%)
Did endorse candidate in photo	53 (79.1%)	14 (20.9%)

Note: N= 338, Chi-Square= 1.54, df= 1, p= .10

H10: Photos of candidates appearing in newspapers which endorsed that candidate during the runoff election will be more likely to depict the endorsed candidate favorably than photos of candidates appearing in newspapers which did not endorse the pictured candidate during the runoff election.

H10 is supported. Table 10 indicates that photos running in newspapers which endorsed the candidate pictured were more likely to show the candidate in a favorable depiction than photos running in newspapers which did not endorse the candidate pictured.

Table 10: Chi-square test of endorsement in runoff photos by depiction of candidates

	Favorable	Unfavorable
Did not endorse candidate in photo	220 (81.2%)	51 (18.8%)
Did endorse candidate in photo	62 (92.5%)	5 (7.5%)

Note: N= 338, Chi-Square= 5.01, df= 1, p= <.05

Discussion

This study found that newspaper endorsement of candidates pictured resulted in more placement of photos on the front page or on section fronts and more favorable depiction than non-endorsement of candidates pictured in the runoff election. In other words, the candidate endorsed by the newspapers publishing his pictures was more likely to be seen on the front page or on section fronts and more likely to receive favorable depiction in published photos than the candidate who was not endorsed by the newspapers publishing his pictures in the runoff election.

Newspaper endorsement of pictured candidates appeared to have no effect on any of the five dependent variables in the primary election nor three of the dependent variables in the runoff election. In the primary election, none of the dependent variables; including size, color/black and white, placement, fold location nor depiction, were affected by the independent variables. In the general election size, color/black and white and fold location were not impacted by the independent variables.

Overall, it appears that decision makers at Louisiana daily newspapers made a good effort to provide balanced visual coverage of the campaign, at least in terms of providing endorsed candidates and non-endorsed candidates similar visual coverage. Evidence of unbalanced visual communication during the primary election was not found in this study. Some unbalanced visual

communication effects were evident in the runoff election. A crowded field of 18 candidates was narrowed to two for the runoff election. The winner of the election was a conservative republican businessman (Mike Foster). His opponent was a liberal African American democrat who held office as a U.S. Representative (Cleo Fields). Ten daily newspapers endorsed Foster. No daily newspapers endorsed Fields. Fourteen of the 24 daily newspapers (more than half) did not endorse any candidate in the runoff election. Perhaps as the election intensified, editors may have made decisions to place more photos of the endorsed candidate, Foster, on the front page and to use more photos depicting him more favorably. It is difficult to say that newspaper endorsement played a role in these decisions. Yet, there is some evidence that newspaper endorsement may have impacted how photos were edited and displayed. But, for the most part, editors in Louisiana daily newspapers did not appear to be strongly influenced by political newspaper endorsements in their visual coverage of the campaign.

This study included a narrow range of independent variables purposefully. Further research may reveal new insights into the research questions posed here. Other variables which may have an impact on decisions made about visual communication during a political campaign should be explored. Other research could also examine how non-daily newspapers might differ from daily newspapers regarding political endorsements in newspapers and visual communication. Since some predicted evidence was found, a similar analysis of a presidential campaign might prove useful to scholars, political campaign managers and journalists.

Endnotes

1. Earnest C. Hynds, "Editorials, Opinion Pages Still Have Vital Roles at Most Newspapers," *Journalism Quarterly* 61 (1984): 634-639.

2. Hynds, "Editorials, Opinion Pages Still Have Vital Roles at Most Newspapers, 636.

3. Peter Clarke, "Endorsement Editorials: 'Sense of Dismay at the Quality,' 'Crafted by an Extremely Adolescent Mind,' 'Very, Very Thin Gruel," *The Masthead*, spring 1981, 36-37.

4. Peter Clarke, "Endorsement Editorials: 'Sense of Dismay at the Quality,' 'Crafted by an Extremely Adolescent Mind,' 'Very, Very Thin Gruel," 36-37.

5. Malcolm B. Parsons, "A Political Profile of Newspaper Editors," *Journalism Quarterly* 54 (1976): 700-705.

6. George Garneau, "Clinton's the Choice," *Editor and Publisher*, 24 Oct. 1992, 9-11, 44-45.

7. Dorothy Giobbe, "Dole Wins...In Endorsements," *Editor and Publisher*, 26 Oct. 1996, 7-11.

8. Dorothy Giobbe, "Dole Wins...In Endorsements," 9.

9. Stacy Jones, "Declining Endorsements," *Editor and Publisher*, 26 Oct. 1996, 12-14.

10. Stacy Jones, "Declining Endorsements," 12.

11. Stacy Jones, "Declining Endorsements," 14.

12. James E. Greg, "Newspaper Editorial Endorsements and California Elections, 1948-1962," *Journalism Quarterly* 42 (1965): 532-538.

13. Maxwell McCombs, "Editorial Endorsements: A Study of Influence," *Journalism Quarterly* 44 (1967): 545-547.

14. Michael Hooper, "Party and Newspaper Endorsement as Predictors of Voter Choice," *Journalism Quarterly* 46 (1969): 302-305.

15. William M. Mason, "The Impact of Endorsements on Voting," *Sociological Methods and Research* 1 (1973): 463-495.

16. Solomon Fulero, "Perceived Influence of Endorsements on Voting," *Journalism Quarterly* 54 (1977): 789-791.

17. Robert S. Erikson, The Influence of Newspaper Endorsements in Presidential Elections: The Case of 1964," American Journal of Political Science 20 (1976): 207-233.

18. Robert E. Hurd and Michael W. Singletary, "Newspaper Endorsement Influence on the 1980 Presidential Election Vote," *Journalism Quarterly* 61 (1984): 332-338.

19. Tim Counts, "Effect of Endorsements on Presidential Vote," *Journalism Quarterly* 62 (1985): 644-647.

20. Byron St.Dizier, "The Effect of Newspaper Endorsements and Party Identification on Voting Choice," *Journalism Quarterly* 62 (1985): 589-594.

21. Kenneth Rystrom, "Apparent Impact of Endorsements by Group and Independent Newspapers, " *Journalism Quarterly* 64 (1987): 449-453, 532.

22. Cecilie Gaziano, "Chain Newspaper Homogeneity and Presidential Endorsements, 1972-1988," *Journalism Quarterly* 66 (1989): 836-845.

23. J.W. Click and Guido H. Stemple III, "Reader Response to Front Pages with Four-color Halftones," *Journalism Quarterly* 53 (1976): 736-738.

24. Robert H. Bohle and Mario R. Garcia, "Reader Response to Color Halftones and Spot Color in Newspaper Design," *Journalism Quarterly* 64 (1987): 731-739.

25. Kathy Gilbert and Joan Schleuder, "Effects of Color and Complexity in Still Photographs on Mental Effort and Memory," *Journalism Quarterly* 67 (1990): 749-756.

26. Mario R. Garcia and Pegie Stark, *Eyes on the News* (St. Petersburg, FL: The Poynter Institute for Media Studies).

27. Maxwell E. McCombs, John B. Mauro and Jinok Son, "Predicting newspaper Readership from Content Characteristics: A Replication," Newspaper Research Journal 10 (1988): 25-31.

28. Maxwell E. McCombs, John B. Mauro and Jinok Son, "Predicting newspaper Readership from Content Characteristics: A Replication," 28.

29. Rita Wolf and Gerald L. Grotta, "Images: A Question of Readership," *Newspaper Research Journal* 6 (1985): 30-36.

30. Laurence B. Lain and Philip J. Harwood, "Mug Shots and Reader Attitudes Toward People in the News," *Journalism Quarterly* 69 (1992): 293-300; Laurence B. Lain, "How Readers View Mug Shots," *Newspaper Research Journal* 8 (1987): 43-52.

31. Wayne Wanta, "The Effects of Dominant Photographs: An Agenda-Setting Experiment," *Journalism Quarterly* 65 (1988): 107-111.

32. Sandra E. Moriarty and Gina M. Garramone, "A Study of Newsmagazine Photographs of the 1984 Presidential Campaign," *Journalism Quarterly* 63 (1986): 728-735.

33. Sandra E. Moriarty and Mark N. Popovich, "Newsmagazine Visuals and the 1988 Presidential Election," *Journalism Quarterly* 68 (1991): 371-380.

34. Sarah W. Plaster, "An Analysis of Front Page Newspaper Photographic Coverage of the 1992 Presidential Election Campaign" (paper presented at the annual meeting of the AEJMC, Atlanta, GA, 1994).

35. John W. Williams, "Newspaper Mug Shots, Readers' Attitudes and an Illinois Case Study" (paper presented at the annual meeting of the AEJMC, Atlanta, GA, 1994).

36. Sandra E. Moriarty and Gina M. Garramone, "A Study of Newsmagazine Photographs of the 1984 Presidential Campaign," 730-731.

37. Sandra E. Moriarty and Mark N. Popovich, "Newsmagazine Visuals and the 1988 Presidential Election," 375.

Visual Communication Division
AEJMC Convention, 1997
Chicago

Learning News Through the Mind's Eye: The Impact of Supporting Graphics in Television News

Stefan A. Jenzowsky, Thomas Knieper & Klaus B. Reginek

Contact:

Thomas Knieper & Stefan A. Jenzowsky
Institut für Kommunikationswissenschaft (ZW)
Ludwig-Maximilians-Universität München
[Dept. of Communication Studies at the University of Munich]
Oettingenstr. 67
D-80538 München [Munich]
Germany
Phone: +49-89-2178-2435 & +49-89-2178-2418
Fax: +49-89-2178-2429 & +49-89-2178-2443
e-mail: knieper@ifkw.uni-muenchen.de & jenzwsky@ifkw.uni-muenchen.de

BEST COPY AVAILABLE

Learning News Through the Mind's Eye: The Impact of Supporting Graphics in Television News

Abstract

The purpose of this paper is to bring together two separated areas of research in order to gain a clearer understanding on how we process supporting graphical inserts in television news and which learning processes are involved in watching everyday news programs. For this purpose, we examine and try to integrate the research areas of cognitive psychology and mass communication research. Data is presented from a laboratory experiment in which two independent variables were manipulated: (a) the graphic visualization of news presentations, and (b) the graphic representation in recognition tasks. The data suggest a link between use of visual elements in news programs and performance in recall and recognition as well as attributed importance of the issues presented during the newscast. In the examined population a high acceptance of supporting graphics in television news could be ascertained. A picture superiority effect was found for any condition of retrieval, while - for most conditions - no encoding specificity effect could be demonstrated.

Acknowledgements

The authors thank the reviewers for their careful reading and helpful comments. Those suggestions and comments have lead to some changes in this revised and compiled version of the paper.

Learning News Through the Mind's Eye: The Impact of Supporting Graphics in Television News

Content:

INTRODUCTION 1

A TAXONOMY OF MASS MEDIA GRAPHICS 2

PICTOGRAMS AND PICTORIAL SYMBOLS 2
GRAPHICAL ADAPTATIONS 3
VISUALIZED ELUCIDATIONS 3
MASS MEDIA MAPS 4
CHARTS AND QUANTITATIVE DIAGRAMS 4
FINAL OBSERVATION 5

LEARNING THEORIES IN COGNITIVE PSYCHOLOGY 5

THE DUAL CODING THEORY OF A. PAIVIO 6
PROPOSITIONAL MODELS OF Z.W. PYLYSHYN, G.H. BOWER AND J.R. ANDERSON 6
ENCODING SPECIFICITY 7
EMPIRICAL TESTS OF PICTURE SUPERIORITY EFFECTS 7

PREVIOUS RESEARCH ON MASS MEDIA GRAPHICS 8

RESEARCH ON MASS MEDIA GRAPHIC EFFECTS 8
RESEARCH ON THE ACCEPTANCE OF MASS MEDIA GRAPHICS 10

HYPOTHESES 10

METHOD 12

RESPONDENTS 13
PROCEDURE 13
EXPERIMENTAL PROGRAMS 13
MEASURES 15
QUESTIONNAIRE VARIATION 15

RESULTS 16

Hypothesis 1: Picture Superiority 16
Hypothesis 2: Effect of Dynamic Graphics 18
Hypothesis 3: Interaction Effect of Encoding and Retrieval Mode 20
Hypothesis 4: Acceptance of Infographics in Television News 20

DISCUSSION 21

REFERENCES 23

Learning News Through the Mind's Eye: The Impact of Supporting Graphics in Television News

Introduction

News programs are existent in the television networks of almost all countries around the globe while their format varies very little. Therefore, recent developments that have changed the production modes of news programs have had impact on newscasting virtually everywhere. Examples for these recent developments that have become increasingly popular with the reduction of computer costs and the increase in microprocessor performance are the virtual television studios and the use of supporting graphical elements. Due to the increase in computer power and usability, computer graphics that visualize news stories can, today, be produced within minutes. An example for the in-time production of supporting news graphics could be a story about the hijacking of a Russian airliner. Within seconds, the graphics editor in the newsroom can assemble a map showing the current position of the plane, as well as take off location, original destination and new destination, thereby eliminating the use of archived video footage of planes in the air from this newscast.

Still graphics have been in use for many years. A new dimension has been added by making these graphics active e.g. by showing the flightpath of the hijacked airliner dynamically. The results are informative dynamic mass media graphics. They can be used to visualize events, incidents, or processes, in particular if there are no photographs, films, or any other real life images. Mass media graphics lighten the mediation of statistical data, technical details, and many other things too complicated or too complex to be explained by text (only). In all of these cases mass media graphics are an important journalistic tool. Mass media graphics enable journalists to explain events and incidents, to processes easily and to give the recipients better and more effective information by using helpful redundancy (Knieper 1996a, 1996b).

One of the lesser asked questions concerns the processes of learning from the news stories produced in this fashion. In cognitive psychology the different modes of verbal and visual learning are a topic that has been addressed frequently (an overview is provided by Salomon 1989).

Mass media graphics, also known under a large range of names like supporting graphics, instructional graphics, newspaper graphics, editorial graphics, news graphics, communication

graphics, cognitive graphics, informational graphics, or - in short - infographics, etc., are a research topic not only for cognitive psychologists, cartographers, or statisticians, but in particular for researchers in the fields of journalism and mass communication. Most of the scientists did their research in the field of newspapers concerned with the effects of different kinds of infographics and their effects on news reception (an overview is provided by Knieper 1995).

In advance of a research review, we have to look on the subject of research, the mass media graphics, first. This is necessary, because a general accepted terminology and taxonomy of infographics respectively mass media graphics is still missing. The learning theories in cognitive psychology and the previous research on mass media graphics are needed as a theoretical background, therefore presented in short. After these basic remarks our study will be presented in detail. First four hypotheses will be stated and, second, our method will be introduced in detail. Last but not least our results will be given and will be discussed with regard to the theoretical framework.

A Taxonomy of Mass Media Graphics

Five main subgroups of mass media graphics (infographics used in mass media) could be distinguished. In particular there are 1.) pictograms and pictorial symbols, 2.) graphical adaptations, 3.) visualized elucidations, 4.) mass media maps, and 5.) charts and quantitative diagrams (Costigan-Eaves 1984, Knieper 1995: 47-111).

Pictograms and Pictorial Symbols

> "A symbol stands for something. It is visually precise; it attempts to get at the essence of an idea— either by being a literal, miniature drawing, or by being a non-literal, visual metaphor. A symbol can give an identity to a subject and, by repeated use, can come to equal it." (Holmes / DeNeve 1990: 11)

Pictograms are abstract, composed, or typified pictorial symbols having regard to international standardization. The standardization is the reason why they dispose unified interpersonal meanings (monosemiotical system). In regard to their etymological conception, combined by the Latin word "pictus" (picture) and the Greek word "gramm" (writing), one realizes that the "written picture" combines the characteristics of visual and textual presentation. Waiving the claim of standardization, one could talk of universally intelligible visual or - better - pictorial symbols. In such cases the meaning depends on mass media context and the individual viewer. Anyway, they are easily understood and enable a fast cognitive treatment of information. Used by the press, pictograms could help structure pages (e.g. different sport symbols in the sports section), may be helpful in laying out content pages, or could increase recognition of jumped

stories. Used by television, pictograms could announce issues visually, e.g. in television news. (Holmes / DeNeve 1990, Knieper 1995: 47-52, 122-125, Moen 1989: 91-94)

Graphical Adaptations

This kind of mass media graphics is rather like a graphical frame for catchwords, listings, or any other textual parts not using numbers. Using graphical elements related to the topic, graphical adaptations are a further development of tables and boxes including the above mentioned textual elements. Graphical adaptations are a kind of graphical sidebars dealing with graphicacy to establish a visual association for the textual context. In general, graphical adaptations deal with polydimensional or multileveled facts, too complicated or too tedious to be described by text in full length, and, therefore, shortened and packed in an infographical environment. To accomplish this objective, the textual elements must be submitted to a graphical process of adaptation. Only if there is an entity of textual and graphical elements this conglomeration can be called a graphical adaptation. (Knieper 1995: 52-54)

Visualized Elucidations

Visualized elucidations are the infographical answers to how-questions: how-things-work, how-things-are-organized, how-things-are-done, how-to-do-it-yourself, etc. In literature, therefore, this type of mass media graphics are e.g. labeled as *explanatory graphics* (Wildbur 1989: 111), *how graphics* (Smith / Hajash 1988: 716), *how-to graphics* (Stark / Hollander 1990: 6), *narrative graphics* (Tufte 1992: 40), and likewise *visualized elucidations* (Knieper 1995: 54). Visualized elucidations could be distinguished in (mostly objective) visual representations of facts with or without dimension in time and in (mostly abstract) visual representations of structures or relations. If the visualized elucidation shows a fact with no dimension in time, this entity could be either a fact independent by time or a cross-section in time. In any case, the subject will be a momentary view on a fact or situation. If different phases of a process or procedure in time are to be shown, the visualized elucidation will be a panelized time series. Relevant movements, developments, etc. must not necessarily be split up in several pictures or panels, but can be symbolized in a single picture or panel by using dynamic graphical symbols like arrows, etc. Taken to extremes, this means that the different stages of a process could be viewed omnipresence in a single infographic e.g. by using a corresponding numeration. (Knieper 1995: 56-58) Visualizations of structures or relations result in networks, netlike constructions or relations between single elements of a certain entirety. Well-known representatives of this type of visualized elucidations are flow-charts, organization charts, sociograms, company management diagrams, genealogical trees, etc.. (Bertin 1974: 277-291, 1982: 128-138, Holmes 1984: 106-107, Knieper 1995: 59-62, White 1984: 84-86)

Mass Media Maps

Mass Media Maps are maps used by newspapers, magazines, and television. They serve as political and economic information, offered on a daily basis, "mostly using strongly simplified images focussing on political activities, military actions, regions of disasters, terrorism and calamities." (Witt 1979 in his "Dictionary of Cartography" cited by Scharfe 1993: 256-257) Secondly, mass media maps are, like all other maps, a commentated, exemplified, and generalized spatial information system of a county, region, country, the earth, other planets, etc. in reduced scale (Knieper 1995: 63). In regard to their production time, duration of use, and limited actuality, mass media maps are often called short-time maps (Scharfe 1993: 260).

> "'Short-time maps' can be subdivided into 'mass media maps' ('journalistic maps') and 'customer's media maps' (for example maps in air-traffic brochures), the first of them subdivided into 'printed journalistic maps' and 'television maps', moreover, the first of them subdivided into 'newspaper maps' and 'magazine maps'." (Scharfe 1993: 260)

Mass media maps can not only be distinguished by the media they are used in, but also by the shown content. The two general types are the *reference maps* or *locator maps*, and the *map-related visualizations*. Here, the reference maps can again be divided in a *topographic type* and a *thematic type*:

> "A 'reference map' cartographically shows the topographic scene or geographic surroundings where the event took place that is explained by the article the map belongs to. With regard to the subject shown by a 'reference map' we can distinguish a 'topographic type' from a 'thematic type'. In general the 'topographic type' contains topographic features only like coast lines, borders, settlements, and traffic lines as well as a reduced set of topographic names. Sometimes the 'topographic map' is completed by an inset in a minor scale to give a more distinct impression of the general geographic situation ... or by an arrow (or a cross) marking the place of interest. For the most part the signs used in this type of maps must not be explained by a legend. 'Thematic maps', however, graphically focus on the pattern of distribution of special features that generally have to be explained by a legend. As a matter of fact 'thematic maps' are graphically much more delicate and by this reason larger sized than the 'topographic type' of journalistic maps." (Scharfe 1995: 2824)

Map-related visualizations are all cartographic visualizations which are not maps but very similar to maps by scales and themes shown. The difference is due to the fact dissimilar projection techniques are used or other planes of projection. (Knieper 1995: 84-90) If a map, or map-related visualization, mainly depicts numerical information or data distributions spatial, it will be defined as a *data map* and classified in the group: charts and quantitative diagrams.

Charts and Quantitative Diagrams

Charts and quantitative diagrams visualize information about numbers and their relationship. In general they are statistics presented graphically. (Holmes 1984: 22) Charts and quantitative diagrams are numerical infographics. To systematize this type of mass media graphics, the

dimensions and origins of the data, the reference figures in the plane, as well as the different graphical elements, must be considered equivalent. This makes it possible to distinguish between *proportional representations* of length (e.g. bar or column charts), area (e.g. pie charts), and volume (e.g. certain pictographs), *scatterplots* or *scatter diagrams*, *line* or *fever charts*, *data maps* (e.g. quantitative choropleth maps or maps using two- and three-dimensional graduated symbols), *numerical translations* (graphical adaptations showing numbers), and a residual group including all other infographics with numerical character. (Knieper 1995: 91-111)

Final Observation

Using this taxonomy, now it should be possible to associate every single mass media graphic at least with one of the five subgroups. If a mass media graphic belongs to one subgroup only, one can speak of a mass media graphic of first order. In everyday use, there often will be infographical units combining two or more types of mass media graphics. These infographical units can also be treated as autonomous mass media graphics. These mass media graphics of second order are not problematic at all. On the contrary there are graphics difficult to decide, whether they are infographics or not. The question is up for discussion, if for example vignettes, logos, typographics, boxed sidebars, instructional comic strips, illustrations, search warrant graphics, phantom graphics, riddle graphics, and even tables should be classified as infographics. If there is any doubt, whether a visualization is an infographic or not, due to not belonging to either one of the five types of mass media graphics mentioned above, the researcher should classify them as an infographic-like miscellaneous. Now one will be able to subsume graphics with informational character but not being pure infographics at all.

The attempt of the present study is to investigate the memory impact of not only one type of mass media graphics, but to put to test various types of mass media graphics. As shown above, mass media graphics can essentially be divided in five categories: pictograms / pictorial symbols, graphical adaptations, visualized elucidations, mass media maps, and charts / quantitative diagrams. But not all of these can be considered as useful in the environment of television news. Therefore, in regard to news programs graphical adaptations, pictograms and pictorial symbols are excluded from this research. This leaves only three categories of mass media graphics suitable for television news: visualized elucidations, mass media maps, and charts / quantitative diagrams.

Learning Theories in Cognitive Psychology

In learning psychology, experimental designs were often used to test the learning impact of graphics. In the studies following this experimental paradigm (for an integrating approach see

Eveland 1997), memory performance was often compared between subjects that learned words from a word list and those that learned analogous graphics from a graphics list. The graphics used were often pictorial symbols or pictograms, drawings representing e.g. a house, a cat or a tree. One finding has emerged in most of these experiments: These pictorial symbols and pictograms can better be learned, recognized and also recalled than words. Two different positions are held to explain the consistent findings that visual stimuli are generally leading to better recognition and (free) recall scores, an effect that has been labeled *picture superiority* and that has frequently been replicated (Kirkpatrick 1894, Otto 1962, Shepard 1967, Jenkins et al. 1967, Salomon 1989, Paivio 1991). Likewise, there has been another, robust finding about the abstractness of the verbal stimuli: abstract words are harder to recall or recognize than words that have concrete meanings. Abstract concepts like "tomorrow" or "honesty" are obviously stored differently (or with lesser redundancy) in memory, with the result that abstract words are harder to recall and recognize (e.g. Hänggi 1989).

The Dual Coding Theory of A. Paivio

The first theoretical position is known as the dual coding theory (Paivio 1971, 1975, 1983, 1986, 1991, Brander et al. 1985, Holicki 1993). Paivio is postulating the existence of two separate memory systems. While perceptual information like form, color, etc. is stored in a perceptual system, a verbal system is memorizing lexical information like phonemes (Paivio 1986: 57, 1991: 54). The word "house" is stored in the second system while a drawing of a house would be memorized in the perceptual system (Paivio 1991: 47). Both systems are interacting at the stages of referential and associative processing. But in the different memory systems, words and pictures are stored completely separately. On the basis of this concept, Paivio is attributing better recall and recognition for visual stimuli to a better chance of double-coding of visual stimuli in the two memory systems. The same argument is made for concrete words, that can, in contrast to abstract words, more easily visualized. While words like "flower" might have interindividual differing, prototypical pictorial representations, no such representation can be ascribed to "tomorrow".

Propositional Models of Z.W. Pylyshyn, G.H. Bower and J.R. Anderson

Pylyshyn (1977) is proposing a different model that contains a joined memory area where the content of verbal and nonverbal information is stored in a propositional abstract manner. A similar model has also been adapted by Anderson and Bower (1972, 1974), their *mental network model* explains the better recall and recognition scores for visual information by the richness of visual stimuli (and, analogous, the richness of concrete words) (Anderson / Bower 1974, Holicki 1993). Therefore, the richer visual presentations are leading to more propositional connections. More of these connections also mean a higher number of access pathways to the information recognized. This should lead to better recall and recognition

scores, because there is a higher chance that memory areas are activated if more access paths (and from more remote memory items) are existing.

Although both positions have converged somewhat, a clear decision for one model cannot be presently made (Baddeley 1990). This is mainly due to the fact that, today, there is no known critical empirical test: "All seem to recognize quite clearly that perhaps in principle we cannot resolve this issue empirically" (Glucksberg 1984: 102). Compromising models of memory representation have been formulated by Farah (1989) and Ballstaedt (1987).

Encoding Specificity

Memory models that operate with a propositional network imply that it would be helpful for reproduction if the learning context were present during a memory test. This is the case due to the different memorized items associated with concepts activated during encoding (like "psychological laboratory" or "early morning", Anderson 1989: 177). These context effects are often referred to as *encoding specificity*, as the context enhances the memory trace that may be helpful during reproduction or recognition (Anderson 1989: 177). Smith, Glenberg and Bjork (1978) demonstrated the encoding specificity effect with different local settings. Their subjects could memorize 13 percent more items when tested in the same setting used whilst initially learning the items. Godden and Baddeley (1975) demonstrated an even more drastic encoding specificity: Their subjects were either learning words under water or on land. Memory for words was significantly better when the decoding setting was equivalent to the encoding setting (that is if the participants learned and recalled under water or if they did so on land). It was lower when the words were learned under water and had to be retrieved on land or learned on land and had to be retrieved under water. Similar effects are documented for different contexts, like context words or style of presentation (Watkins / Tulving 1975, Anderson 1989). Following this logic, a presentation of stimuli in the same context and in the same fashion should initiate higher recall and recognition levels, than in the case of differing encoding and decoding conditions. This idea is put to further investigation (in Hypothesis 3).

Empirical Tests of Picture Superiority Effects

Jenkins, Neale and Deno (1967) conducted an experiment which is somewhat related to our present approach. Learning material was administered to 120 participants. It consisted of concrete or abstract items, presented as pictures or as words (e.g. "table", "cat", etc.). The dependent variable was operationalized through a recognition-test. In a 2x2-design, this test was also administered with items that were either words or pictures. Therefore, encoding specificity would have suggested an interaction effect between encoding and decoding condition (see above). Even under these circumstances, where context should have clearly preferred an encoding specificity effect, recognition for visual stimuli was still better than that for verbal stimuli. A picture superiority effect was clearly demonstrated with no further

encoding specificity interaction. The worst performance showed subjects that were initially shown words but had to recognize pictures (Jenkins, Neale and Deno 1967, Holicki 1993). In summary, it can be stated that the picture superiority effect continues to be strong, even when the decoding mode is different from the encoding mode. Other research efforts have focused on the influence of verbal and visual information in newspapers regarding attributions towards politicians (Holicki 1993).

Previous Research on Mass Media Graphics

The use of infographics has become an obvious part of our everyday life. Even if the use of infographics is not unique to the mass media, it is a very import range of application.

> "In recent years, newspapers, responding to competition from television, concerned about declining readership, anxious to use new technology, perhaps even worried about their responsibility for public ignorance and apathy, have begun to emphasize background and context in coverage of foreign affairs. Techniques include the traditional method of adding this kind of material to the text of the event-oriented story and a new method, largely borrowed from television, of supplementing the story with a variety of graphic devices - maps, graphic summaries of the event and, often, information about the country's history, culture, etc. The assumption is that such information encourages reading, aids comprehension of the event itself and improves understanding of the context in which it occurs." (Griffin / Stevenson 1992b: 84-85)

Hence a lot of research was done about mass media graphics. This research is well documented in the mass communication literature. Surprisingly, most of the research is done about infographics used in the press (e.g. David 1992, 1993, 1996, Griffin / Stevenson 1992a, 1992b, 1993, Hollander 1992, 1993, 1994, Kelly 1989, 1990a, 1990b, 1993, Knieper 1995, 1996a, 1996b, Knieper / Eichhorn 1994, Lester 1988, Martinson 1991, Pasternack / Utt 1990, Pun 1991, Ramaprasad 1991, Scharfe 1993, 1995, Scharfe / Bitter 1996, Smith / Hajash 1988, Stark / Hollander 1990, Stevenson / Griffin 1992, Tankard 1987, 1988, 1989, 1992, 1994, Wainer 1981, 1982, 1984, Wanta / Remy 1995, Weidenmann 1994). Seldom research is conducted in the area of mass media graphics used by television (e.g. Anderson et al. 1981, Berry / Clifford 1986, Foote / Saunders 1990, Grimes 1996, Reginek 1995, Weidenmann 1994, Wicks 1995).

Research on Mass Media Graphic Effects

In respect to mass media graphic effects two lines of infographic research can be distinguished.

The first one examines, whether Tufte's concepts (Tufte 1992) of data density, data-ink ratio, and perceptual distortion are accurate in the use of newspaper graphics (e.g. David 1992, Kelly 1989, 1990a, Tankard 1988, 1989). This line of research established that generally there will be

no negative effects when newspaper graphics contain a substantial amount of non-data ink (Kelly 1989). This means that there will be no negative consequences, if infographics work with ornamental design, pictorial symbols, and 3-dimensional-effects, or are designed as a chartoon (Tankard 1988, 1989). The only exception is that an optical illusion disturbs the accuracy of information processing, retrieval, and recall (e.g. Kelly 1989: 638, Knieper 1995: 125-131, 1996a). David (1992) showed that there will be no lack in the accuracy of perception of quantitative infographics if there is given (somewhat) perceptual distortion in the representation of data.

Secondly, a large part of studies deals with all sorts of positive effects on

- the effectiveness of mass media graphics in increasing reader attention, information retrieval, comprehension, understanding, and knowledge of news content (e.g. Griffin / Stevenson 1992a, 1993, Ramaprasad 1991, Stark / Hollander 1990, Stevenson / Griffin 1992, Tankard 1988, 1992, Wilcox 1964, Ward 1992),
- the accuracy of perception, recall, and recognition (e.g. David 1992, Kelly 1989, Ramaprasad 1991), and
- the interest and information gain using special designed infographics (e.g. Tankard 1988).

Only by occasion further research questions are asked. For example, Pun (1991) did his research about news infographics and knowledge gap and Hollander (1992, 1993, 1994) about newspaper graphics and inadvertent persuasion. However, Ramaprasad (1991: 94-95) rephrases the specific research question: "Do informational graphics help readers to attend to, retrieve information from, understand and recall a story?" Stevenson and Griffin answer this question quite clearly (1993: 19-21):

> "In general, however, the results here are compatible with most of the others collected in a wide range of studies. Readers do learn from visual presentation of material [...] However, words are still important. Consider the effect of the traditional technique of writing about the event, which was identical to the effect of the graphic. Writing about an event is somewhat more effective in helping readers understand it than showing it in a graphic. Doing both is better. The comparable previous experiments showed that a combination of old and new techniques produced an additive effective. Here, however, there is evidence of additional gains in knowledge when the two are combined."

The common denominator is that, using infographics in press, there generally are no negative effects on understanding and memory - but frequently positive effects. These positive effects can be observed in particular, if the infographic is not too complex and abstains drawings in perspective. Furthermore, redundancy in text and infographics seems always helpful in processing, recall, and recognition of information. (Knieper 1995: 215-216)

Research on the Acceptance of Mass Media Graphics

There is a high acceptance of infographics in the press, not only among the recipients but also among the communicators (Knieper / Eichhorn 1994, Knieper 1995: 219-299, Pasternack / Utt 1990).

> The "results suggest that subjects went to the informational graphics mainly for content-related reasons. In the case of the large, dominant infographic, 55 percent used it as a springboard into the article, read it because they felt it would be easier to capture the gist of the story content from the infographic, or felt that if they read the informational graphic, they could avoid the article altogether. Those who read the dominant graphic after the headline / text did so principally to expand upon what they already had read. Others indicated they read the headline / text first out of habit - they always go first to a headline.
> Large dominant graphics are being used [...] as a design element to attract readers into the page. Graphics, therefore, could become as useful as photographs. Not only do they tell or complement a news or feature story, they also serve as an element of design and in doing so, take on a more important function than just adding more words and lines to the page." (Pasternack / Utt 1990: 39)

A more frequently use of infographics in the press is desired by a majority, especially in the local, the politics, the economic and the science sections. (Knieper 1995: 219-299) The only restriction on the side of communicators is that the printed mass media graphics should be designed well. Lack in design, e.g. incorrect graphic form, convention-violating graph, imprecise point of presence, unnecessary perspective, wrong use of scales, jiggled baseline, missing legend, wrong or missing labels, misleading pictorial symbols, inaccuracy, etc. should be avoided (Holmes 1984: 166-177, 1989, Knieper 1995: 125-131, Tankard 1987, Tufte 1992: 107-121, Wainer 1981, 1982, 1984). Besides this, the infographic editor should remember, that information is only one object of mass media graphics' desire. Further purposes are actuality, attractiveness, clearness, and intelligibility (Holmes 1984, 1989, 1991, Holmes / DeNeve 1985, 1990, Knieper 1996).

In this regard the basic construction and design principles of infographics could be generalized to television sector for sure, because it is hardly possible that there is an entirely different fundamental basis in view of the media specific constraints. Nevertheless, this does not address the problem that in the area of television news the question of acceptance among the recipients was not satisfactory answered yet (see Hypothesis 4).

Hypotheses

News programs are essentially watched in order to get information about recent developments, and news reception can be described as a voluntary, self-structured learning situation. Therefore, the psychological memory models discussed above can be applied to news reception.

The dual coding theory of Paivio and the propositional models discussed above predict essentially the same effect for supporting graphics in television news. Following the dual coding theory, information derived from news graphics should be encoded in the perceptual memory system and also in the verbal memory system. The latter can especially be assumed if the graphical elements are supporting information that is presented on the audio channel as well. Therefore, in the present experiment only supporting graphics that essentially duplicate the information given on the audio channel were employed. In this setting, the dual coding theory clearly would predict double-coding. This should result in a surplus of recall and recognition ability for those viewers who watched a newscast with supporting graphics. In the terms of propositional mental models, supporting graphics should provide additional elements on which propositions could be formed. This should lead to a higher number of connecting memory pathways which should also result in better recall and recognition scores (see above). Once again, those effects should clearly be occurring with graphics that support the audio information.

Double-coding should not depend on the presentation form of the graphics. Thus, moving graphics (dynamic graphics) should produce essentially the same effects as standstill versions of the same graphics. Following this logic, one hypothesis can be employed predicting the existence of picture superiority effect for supporting news graphics:

Hypothesis 1 (Main effect for picture superiority):
The information presented in supporting news graphics is better recalled and recognized than information that is not supported by graphic means.

This effect need not be limited to recall and recognition. We are assuming that the information presented in graphic fashion will not only be memorized to a better degree, but will also be judged *more relevant* and that the story as a whole will be considered *more professional*.

Following an activation / attention approach, the dynamic (moving) graphics should have an influence on memory due to the fact that they draw the viewers' attention and enrich their motivation to process the information. A higher level of processing should in turn have an impact on the likelihood that information can be stored in long-term memory (Craik / Lockhard 1972, Craig / Tulving 1975). This simple consideration is leading to hypothesis 2:

Hypothesis 2 (Main effect for dynamic graphics):
The information presented in dynamic supporting news graphics is better recalled and recognized than information that is presented by non-dynamic graphics.

Once again, this effect need not be limited to recall and recognition. We are assuming that the information presented in dynamic news graphics will not only be more easily memorized, but will also be judged *more relevant* and the story as a whole will be considered *more professional*.

The application of the principles of *encoding specificity* lead to a third hypothesis. The assumption is that retrieval processes are enhanced when the concepts activated during encoding are present at retrieval. This principle should not only be applicable to context effects (see above). Rather, one would assume an effect if the presentation in the learning condition is similar to the retrieval condition. Applied to the rationale of experimental testing, this idea can be described as an interaction effect between verbal and visual conditions. This interaction effect predicts higher retrieval scores if the encoding and the decoding circumstances are similar. Lower recall and recognition scores should result from a dissociation of verbal and visual tasks. This means that a television viewer, asked (verbally) about the flight route of an highjacked airliner, should have good access to the memorized information, if this information about the flight route has been presented verbally. Likewise, recall and recognition scores should also be higher when someone who watched the story containing a supporting graphic about the flight route is asked to draw the route on a map of Europe. This interaction effect provides the basic rationale for hypothesis 3.

Hypothesis 3 (Interaction effect between learning and retrieval condition):
The information presented in supporting news graphics is better recalled and recognized in a graphic memory test. Analogously, the information presented only verbally is recalled and recognized more easily in a verbal memory test.

This hypothesis is not meant to replace one of the two mentioned above, but it adds an additional possibility of effects. However, this prediction would mean that in daily verbal conversation, which should be one of the most frequent retrieval conditions of news content in reality, verbally learned news should partly be favored against visualized material.

It is well known that newspaper graphics are very popular among the recipients. The question remains open, whether this popularity is equal to the television audience, conjectured in hypothesis 4.

Hypothesis 4 (Acceptance of infographics used by television news):
The majority of the audience wants supporting graphics in television news. Their regularly use will be marked positive by the recipients on average.

Method

In an experimental 3x2-design the variables (a) "graphic visualization of news presentations" (no support by mass media graphics; still mass media graphics; dynamic mass media graphics), and (b) "graphic representation in recognition tasks" (textual coding; graphical coding) were manipulated. Three manipulated news stories were inserted in a regular television news show, specially produced for this study. Recall and recognition of the manipulated news stories were

measured for all respondents in a questionnaire. It also contained general measures about news perception, attributed news quality and television viewing habits.

Respondents

Sixty-four undergraduate students, 34 females (53.1%) and 30 males (46.9%), from the Free University of Berlin (n_B=42) and the Ludwig-Maximilians-University Munich (n_M=22) voluntarily participated in the experiment. All were enrolled in introductory undergraduate communication classes. The students of each university were tested in separate exposure sessions.

Procedure

Respondents were told at the time of recruitment that they would partake in a study on news reception. The students were then randomly assigned to three exposure conditions. Four experimenters, all males, administered the procedure. Participants were tested in group exposure sessions. Each of the exposure conditions was tested in two independent exposure sessions, one at the Free University of Berlin, the other at the Ludwig-Maximilians-University Munich. Upon arrival, the participants were greeted by the experimenter. They were seated in rooms equipped with video projection systems (Barco at the one and Sony systems at the other university). The participants were told that they would watch an older TV newscast taken from the German network PRO7 and that they should watch the program just as they would do at home. After the presentation, the questionnaires were administered. Upon completion of the questionnaires, the participants were thanked and debriefed.

Experimental Programs

The news program seen by the participants was composed from various segments that were aired on PRO7 news during 1993. The program was similar to a regular PRO7 news show in length, issues covered, order of issues, and content. This was acquired by randomly drawing news segments from the large sample of all stories that were shown during 1993. These news stories covered various topics, ranging from UN peace efforts for the Bosnia civil war to a story on a space walk by NASA astronauts as well as a weather report. These stories were then reassembled by the professional news editors who regularly put this newscast together. The stories were placed in their original order, thereby creating a new but completely natural broadcast. The advantage of this program is not only that it is representing a regular, average show, but it is also very unlikely that the program could have been recognized by a participant. One would have had to watch and remember seventeen different newscasts to be able to recall the entire show. The program was also presented by the well-known PRO7 anchorman. As a show that has been assembled from various segments would feature the anchor with a variety of different hairstyles and clothes, these anchor sequences were produced from scratch by the

professional production crew. In pretest sessions, and after the experiment, no viewer even suspected that the program shown was not a genuine PRO7 news program.

Three experimental stories were placed within the seventeen news stories featured in the program. These experimental stories covered (a) reasons for the development of flooding along the German Rhine and Mosel rivers, (b) current development and prognosis for the housing construction market in the former East and West Germany, and (c) the hijacking of a Russian airliner which had been redirected to an airport near Oslo (Norway). All three experimental stories used dynamic supporting news graphics in their original versions. The supporting graphics presented information that was entirely redundant to the information that were given by an off-screen voice overlay. These graphics featured: (a) The process of river straightening that raises the speed of the water flow and reduces capacity, therefore contributing to flooding, (b) monetary column charts showing the increase in building construction 1992 in East and West Germany, and (c) a map of eastern Europe depicting the intended and the actual flight route of the highjacked Russian aircraft.

Like mentioned above, in regard to news programs only three categories of mass media graphics are suitable for television news. In particular they are: visualized elucidations, mass media maps, and charts / quantitative diagrams. All three remaining categories have been employed in the experiment, each of the three experimental stories has featured one kind of mass media graphics. The story about reasons for the development of flooding along the German Rhine and Mosel rivers featured (a) a visualized elucidation, while the newscast on current development and prognosis for the housing construction market in the former East and West Germany used (b) a chart / quantitative diagram, and in the story hijacking of a Russian airliner the flight pass was shown on a (c) mass media map.

The experimental stories were manipulated by eliminating the supporting news graphics (1, without graphics), and by eliminating the dynamic elements into a standstill version (2, non-dynamic). This conversion was performed on a digital graphics processing unit. One example would be that the graphic shown would not mark the flight path of the hijacked airplane as it developed, but that it showed the same map with intended and actual flight routes already completely marked. The versions 1 and 2 were compared with the original, dynamic versions (3). This stimulus construction resulted into three tape versions. With regard only to the three experimental stories, the following news programs have been presented:

- tape 1: development of flooding (without graphic); housing construction market (still graphic); hijacking of airliner (dynamic graphic).
- tape 2: development of flooding (still graphic); housing construction market (dynamic graphic); hijacking of airliner (without graphic).
- tape 3: development of flooding (dynamic graphic); housing construction market (without graphic); hijacking of airliner (still graphic).

Measures

The questionnaire consisted of 11 pages, containing recall and recognition tests as well as questions about news story perception and relevance of various elements of news coverage. Except the recall test all measures were taken on a scale ranging from 0 to 100 percent in 10 percent intervals (11-point scale). This scale was visualized by circles filled with gradually increasing gray values, from white (0) to black (100). This scale was always used in conjunction with bipolar, clearly opposite labeling, like "not at all" and "very good", or "not at all interesting" and "very interesting".

In the recall section of the questionnaire participants were asked to write down the different issues covered in the newscast. In an open question, they were also asked to give details about the different news stories. For the recognition tests, the issues of the three experimental stories were reinstalled by presenting a brief description of the topic of each news story and by showing a screenshot of the anchor in front of the corresponding headline. The participants were then asked how well they could remember the story, indicating their answers between 0 and 100 percent. Furthermore, the questionnaire included questions on how interesting the three experimental stories were, how informative, how understandable, how appealing, how professional, and how relevant. Additionally, the importance of eleven different content facts was questioned for each experimental story, with about half of the facts discussed in the news story, and the other half not mentioned in the news story. With this list, some critical facts from the experimental story were presented which were shown in the supporting news graphics (For these aspects, an enhanced relevance rating was hypothesized in the graphic supported experimental groups). A more realistic recognition test was administered later in the questionnaire. Here, participants were asked to recall details shown in the supporting news graphics (or, not shown in the eliminated graphics, but only mentioned by text). These questions were administrated in two different versions, with or without graphic support.

Questionnaire variation

The questionnaire was administered in two different versions, thereby creating an experimental 3x2-design. One version contained recognition questions that were asked only verbally, the other version asked the same questions with graphic support. One example is the story about the housing construction market. In its version with graphic support, the questionnaire contained four groups of column charts, each showing the building construction growth in West and East Germany. The possible answers ranged from 2% & 45% to 35% & 22% (west & east) annual growth. The correct solution that was presented in the news story was 4% & 35% (west & east) annual growth. In the version without graphic support the plain numbers were presented to choose from, without the bar graphics. Recognition questions for the remaining two stories were constructed in the same fashion, showing the loss of water capacity of straightened rivers in bar graphics or without and featuring a map of Europe to indicate origin, destination, and landing points of the highjacked airplane. The same graphical elements

shown in the original news story were, of course, not used. Instead, a different map or different bar graphs were employed.

Results

Hypothesis 1: Picture Superiority

Hypothesis 1 was confirmed by the data only in part. The three recall measures show different response patterns for the different types of supporting graphics. While the unaided (free) recall of the news program's stories is not effected at all, the (self-reported) recognition of story content was slightly better when supporting graphics were shown. Although this effect is not significant on a 0.05-level for α the tendency is consistent with hypothesis 1. The aided recognition of story content produced a significant effect only for the mass media map. For the mass media map, hypothesis 1 could clearly be supported. The results for the other types of mass media graphics are in the direction of hypothesis 1, but are not approaching statistical significance. (See table one.)

Table 1

Table 1 shows the recall of the story (unaided), recognition of story content (self reported), and recognition of story content (aided) compared by two groups: no graphical presentation vs. graphical presentation.

	Recall of Story (Unaided)			**Recognition of Story Content** (Self Reported)			**Recognition of Story Content** (Aided)		
	Question: Which subjects / stories of the news program do you remember?			Question: In percent between 0 and 100, what would you say, is your memory of the story content?			Knowledge Questions: a) Water quantity after river straightening. b) Building construction growth in West and East Germany. c) Take off, intended destination, stopover, actual destination (scores from 0-4)		
	Means (Frequencies)			Means			Means (Frequencies Respectively Scores)		
Story	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test
(Type of Infographic, if any)	no	yes	p-value	no	yes	p-value	no	yes	p-value
Development of Flooding (Visualized Elucidation)	0.783	0.732	0.671	60.00	68.78	0.105	0.304	0.390	0.250
Housing Construction Market (Chart / Quantitative Diagram)	0.474	0.467	0.520	42.63	47.56	0.240	0.579	0.644	0.314
Hijacking of Airliner (Mass Media Map)	0.818	0.762	0.694	66.82	71.19	0.226	0.818	2.738	< 0.001

The self reported comprehensibility of the relevant story is consistently better for the news stories using a graphical presentation, also a significant result (p-value: 0.024) emerged for the visualized elucidation only. The other self-reported measures, judgment of story professionalism and relevance show no effect caused by supporting graphics. Only the quantitative infographic was judged better in both cases. This means that the assumptions regarding professionalism and relevance of the stories supported by graphics have to be rejected. (See table two.)

Table 2

Table 2 shows the judging of story comprehensibility, story professionalism, and story relevance compared by two groups: no graphical presentation vs. graphical presentation.

	Judging of Story ...								
	Comprehensibility			Professionalism			Relevance		
	Question: In percent between 0 and 100, what would you say, how comprehensible was the story?			Question: In percent between 0 and 100, what would you say, how professional was the story presented?			Question: In percent between 0 and 100, what would you say, how relevant is the story?		
	Means			Means			Means		
Story (Type of Infographic, if any)	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test
	no	yes	p-value	no	yes	p-value	no	yes	p-value
Development of Flooding (Visualized Elucidation)	71.74	82.20	0.024	54.35	46.83	0.831	60.00	56.34	0.692
Housing Construction Market (Chart / Quantitative Diagram)	62.63	63.18	0.469	41.05	46.14	0.194	45.79	52.89	0.149
Hijacking of Airliner (Mass Media Map)	69.55	73.10	0.263	43.64	50.00	0.137	44.55	42.14	0.634

The importance of facts presented in the newscast was measured with respect to one additional assumption to hypothesis 1. It stated that respondents should attribute more importance to such facts that were presented in graphic fashion, and less importance to the facts not presented in graphic fashion if the news story featured supporting graphics. This idea could not be supported fully by the data. Facts presented in graphic fashion are judged more important for the quantitative diagram and the visualized elucidation only, with only the quantitative diagram producing significantly different scores (p-value: 0.040). The graphical presentation of a column chart results in a significantly higher self reported facts' importance in comparison with the version without graphical support. The judgment of the importance of facts presented in the newscast but not shown in the graphical presentation, if any, shows a slight tendency in the predicted direction: For all three media graphic types the self reported importance of the facts in the versions without graphical support is higher than in the versions with graphical support. (See table three.)

BEST COPY AVAILABLE

Table 3

Table 3 shows the judging of the importance of facts presented in news story and presented or not presented in the graphic fashion. (The hypothized direction is shaded gray.)

Judging Importance of Facts Presented in News Story ...

	... Presented in Graphic Fashion			... not Presented in Graphic Fashion		
	Judging the importance (in percent between 0 and 100) of corresponding facts on a scale from 0 to 10. In a second step the mean was calculated.			Judging the importance (in percent between 0 and 100) of corresponding facts on a scale from 0 to 10. In a second step the mean was calculated.		
	Means			Means		
Story	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test
(Type of Infographic, if any)	no	yes	p-value	no	yes	p-value
Development of Flooding (Visualized Elucidation)	79.09	81.83	0.309	68.64	66.59	0.391
Housing Construction Market (Chart / Quantitative Diagram)	56.05	64.83	0.040	70.00	69.19	0.412
Hijacking of Airliner (Mass Media Map)	62.73	62.62	0.507	78.71	75.47	0.181

Hypothesis 2: Effect of Dynamic Graphics

Hypothesis 2 was not supported by the data. The three memory measures and the self-reported measures judgment of story comprehensibility, professionalism, relevance, and of importance of facts show no significant difference between respondents that saw still and dynamic supporting graphics. The only exception is once again the mass media map. The hijacking story was rated significantly more professional with the dynamic graphic of the flightpath included (p-value: 0.027). Consistently, it was also rated slightly more comprehensible and slightly more relevant, although these measures show no significant differences. Overall, the dynamic presentation of the supporting graphics failed to influence the measures taken. Therefore, hypothesis 2 is rejected. (See tables four and five.)

Table 4

Table 4 shows the recall of the story (unaided), recognition of story content (self reported), and recognition of story content (aided) compared by two groups: still graphics vs. dynamic graphics.

	Recall of Story (Unaided)			Recognition of Story Content (Self Reported)			Recognition of Story Content (Aided)		
	Question: Which subjects / stories of the news program do you remember?			Question: In percent between 0 and 100, what would you say, is your memory of the story content?			Knowledge Questions: a) Water quantity after river straightening. b) Building construction growth in West and East Germany. c) Take off, intended destination, stopover, actual destination (scores from 0-4)		
	Means (Frequencies)			Means			Means (Frequencies Respectively Scores)		
Story (Type of Infographic, if any)	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test
	still	dynamic	p-value	still	dynamic	p-value	still	dynamic	p-value
Development of Flooding (Visualized Elucidation)	0.727	0.737	0.474	70.91	66.32	0.713	0.364	0.421	0.358
Housing Construction Market (Chart / Quantitative Diagram)	0.478	0.455	0.562	47.83	47.27	0.529	0.696	0.591	0.763
Hijacking of Airliner (Mass Media Map)	0.842	0.696	0.861	71.58	70.87	0.543	3.000	2.522	0.872

Table 5

Table 5 shows the judging of story comprehensibility, story professionalism, and story relevance compared by two groups: still graphics vs. dynamic graphics.

	Judging of Story ...								
	Comprehensibility			Professionalism			Relevance		
	Question: In percent between 0 and 100, what would you say, how comprehensible was the story?			Question: In percent between 0 and 100, what would you say, how professional was the story presented?			Question: In percent between 0 and 100, what would you say, how relevant is the story?		
	Means			Means			Means		
Story (Type of Infographic, if any)	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test	Graphical Presentation		One-Tailed t-Test
	still	dynamic	p-value	still	dynamic	p-value	still	dynamic	p-value
Development of Flooding (Visualized Elucidation)	82.27	82.11	0.512	43.64	50.53	0.254	54.55	58.42	0.339
Housing Construction Market (Chart / Quantitative Diagram)	71.36	55.00	0.985	51.36	40.91	0.943	55.65	50.00	0.777
Hijacking of Airliner (Mass Media Map)	71.05	74.78	0.293	42.63	56.09	0.027	36.84	46.52	0.117

BEST COPY AVAILABLE

Hypothesis 3: Interaction Effect of Encoding and Retrieval Mode

Following the concept of encoding specificity, it is supposed that information is better recalled, if there are corresponding conditions in the news program and in the questionnaire like 1.) supporting graphic and graphic memory test or 2.) no supporting graphic and textual memory test. Therefore, an interaction effect was hypothesized for encoding and retrieval mode. To test hypothesis 3, an analysis of variance (ANOVA) was calculated for the three different types of supporting mass media graphics. Recognition served as a dependent variable. It was measured either in verbal or graphical mode in the two different questionnaire versions (see above).

For the visualized elucidation, neither main effects nor interaction effects were ascertained. There are no differences in the recognition of story content between the concordant and discordant conditions. For the quantitative diagram, no significant main effects emerged (see table one). However, a significant interaction (p-value: 0.045) was found for the quantitative diagram. The data for the experimental groups is in the predicted direction: The frequencies for the correctly memorized story content are for concordant conditions 0.80 (news story without graphic; textual questionnaire) and 0.68 (news story with graphic; visual questionnaire) and for the discordant conditions 0.33 (news story without graphic; visual questionnaire) and 0.68 (news story with graphic; textual questionnaire). Finally, a significant main effect emerged (p-value < 0.001; see also table one) with no significant interaction for the mass media map. Independent from the questionnaire condition the content of the story showing graphics was remembered better. The scores for the memorized story content are for concordant conditions 0.55 (news story without graphic; textual questionnaire) and 2.68 (news story with graphic; visual questionnaire) and for the discordant conditions 1.09 (news story without graphic; visual questionnaire) and 2.80 (news story with graphic; textual questionnaire).

Altogether, hypothesis 3 could only be supported for quantitative diagrams. The recognition of visualized elucidations seems to be independent from encoding respectively decoding mode. And the use of maps in television news tends to produce higher recognition levels under any retrieval condition.

Hypothesis 4: Acceptance of Infographics in Television News

The majority of our recipients favor infographics in news programs. Asked if they would be supporting the use of graphics in news programs on a regular basis, 78,1 % (50) of the surveyed (non-representative) students answered "yes". 15.6 % (10) said "no" and 6.3 % (4) had no opinion toward this issue. If they had to judge how positive a regular future use of infographics in news stories would be, on a scale from 0 to 100 percent they answered with 68,13 % on average. This is significantly higher than 50 % (p-value < 0.001). Further results show that there is no great difference in judging a story (with regard to attractiveness and interest) whether a supporting graphic is shown or not. The only exception was the use of a column chart in the housing construction market story, which increased the judging of how

interesting the story was from 25.26 % up to 35.91 %. This increase is significant (p-value: 0.025). (See also table six.)

Table 6

Table 6 shows the judging of story attractiveness and story interest compared by two groups: no graphical presentation vs. graphical presentation.

	Judging of Story ...					
	Attractiveness			Interest		
	Question: In percent between 0 and 100, what would you say, how attractive was the story?			Question: In percent between 0 and 100, what would you say, how interesting was the story?		
	Means			Means		
Story (Type of Infographic, if any)	Graphical Presentation no	Graphical Presentation yes	One-Tailed t-Test p-value	Graphical Presentation no	Graphical Presentation yes	One-Tailed t-Test p-value
Development of Flooding (Visualized Elucidation)	46.09	41.22	0.773	50.44	50.98	0.467
Housing Construction Market (Chart / Quantitative Diagram)	31.05	34.09	0.310	25.26	35.91	0.025
Hijacking of Airliner (Mass Media Map)	47.73	45.24	0.668	50.91	48.81	0.663

Discussion

The memory measures support the concept of picture superiority partially. On the aided recall measure, a significant effect was found only for the mass media map. This divergence can not necessarily be attributed to the different nature of mass media maps. It may be caused by the fact that for the map, recognition was measured on a 0-4 scale (origin, original destination, stopover, and final destination of the plane), as opposed to the 0-1 (correct solution / incorrect solution) scale measures for the other two types of graphics. Therefore, a similar effect might have emerged if a wider measure would have been taken for the visualized elucidation and for the quantitative diagram, thereby creating more variance. Although the effect of scale remains unclear it can be concluded that at least supporting mass media maps lead to higher correct recognition of facts. This means that a picture superiority effect is existing for the acquisition of knowledge from everyday news shows.

Maybe the finding that the picture superiority effect is most evident for the mass media map can also be explained by a specific proposition of those maps. They are offering a type of information that should lead to a greater amount of information connections in a mental

network model. This, by providing visual material that (a) relates to the knowledge domains of maps and other geographical representations and (b) requires more cognitive processing activity in the mental visual scatchpad (e.g. mental rotation, localization, scaling, distinguishing landmasses and water, etc.) in order to understand the information content of the map. Therefore, mass media maps may be called the most complex and most (in information processing terms) demanding types of mass media graphics. As one explanation for the picture superiority effect refers to more connecting memory pathways, while the other focusses on the informational richness of graphics, a picture superiority effect was most likely to encounter for mass media maps. And for this type of supporting graphics it could be demonstrated. However, this does not mean that the same principle should not be underlying any reception of supporting mass media graphics.

Hypothesis 2 dealt with the effect of dynamic graphics. It is rejected because the dynamic presentation of the supporting graphics failed to influence the measures taken. As prototypical versions for all three types of mass media graphics useable in television news were included in the present experiment, we conclude that the dynamic presentation mode does not influence any relevant measures of information acquisition, memory, and judgment. Furthermore, the dynamic presentation mode does not enhance judgment ratings, as most of the (not significant) results are in the opposite direction for these variables (see table 5).

This finding leads to a clear conclusion: Neither information acquisition nor the recipient's judgments profit from a dynamic presentation of news graphics. With regard to the additional effort and cost the production of a dynamic mass media graphic is causing, there is no argument for the use of dynamic infographics. Looking at the unchanged judgments for the two graphic versions employed one might even speculate that reception quality (and ultimately ratings) will not benefit from the new dynamic news.

In the present experiment, a confoundation with other production variables could explain the unchanged results. However, this is extremely unlikely. Thus, as both graphics versions were produced by the same crew of professional news graphics editors using professional production facilities and technology. Also, the dynamic versions were aired in the original news shows - and these versions showed similar or even worse results compared to the still versions that were produced for this experiment specifically! For those dependent variables measured in the present experiment, the effort to produce dynamic mass media graphics does not pay off.

An encoding specificity effect could only be demonstrated for the quantitative diagram. One possible explanation considers the fact that the column chart used as a quantitative diagram was more closely resembled in the recognition test section of the questionnaire. Recognition for the visualized elucidation (development of flooding) was measured by presenting a column chart of river capacity loss; and the map that was used in the questionnaire resembled the map from the newscast only vaguely. Opposed to this, the recognition cues presented for the quantitative diagram resembled those from the newscast closer, although they can by far not be

considered identical. If this difference in recognition test material accounts for the divergent results, a clear conclusion can be drawn. In this case, an encoding specificity effect can only be applied to television news if encoding and decoding conditions are very similar (or identical). In non-experimental reality, this should happen rarely.

If this assumption holds, there should be no differing influence of visual and verbal presentation of broadcast news for information retrieval in our everyday life. On the other hand, an encoding specificity effect might show up for more remote encoding and decoding conditions, if more subjects would be tested in an experiment with greater statistical power. Even in this case the effect size would be so small that no relevant implications for our daily information acquisition from broadcast news should derive from the encoding specificity concept as presented above.

In general a high acceptance of supporting infographics in news programs could be ascertained. Therefore, the infographic can be an instrument to increase acceptance - and ultimately also the ratings - of a news program. For this, it does not seem to matter whether these infographics are presented in dynamic or still fashion. On the other hand the use of graphics will not necessarily increase the recall and recognition of story information; but from the data presented above it is also likely that infographic use will not decrease recall and recognition. Using infographics in news programs is at least not harmful, but will can very helpful in many applications. This is true especially for the use of mass media maps.

References

ANDERSON, D.R. / LORCH, E.P. / FIELD, D.E. / SANDERS, J.: The effects of TV-program comprehensibility on preschool children's visual attention. In: *Child Development*, 52, 1981: pp. 151-157.

ANDERSON, J.R.: *Cognitive Psychology and Its Implications*. New York: Freeman, 1980.

ANDERSON, J.R.: *The Architecture of Cognition*. Cambridge, London: Harvard University Press, 1983.

ANDERSON, J.R.: *Kognitive Psychologie. Eine Einführung*. [*Cognitive Psychology. An Introduction.*] Heidelberg: Verlag Spectrum der Wissenschaft, 1989.

ANDERSON, J.R. / BOWER, G.H.: Recognition and retrieval processes in free recall. In: *Psychological Review*, 79, 1972: pp. 97-123.

ANDERSON, J.R. / BOWER, G.H.: A propositional theory of recognition memory. In: *Memory and Cognition*, 2, 1974: pp. 406-412.

BACA, J.C. / BEAUCHAMP, D.G. / BRADEN, R.A. (Eds.): *Visual Communications: Bridging Across Cultures. Selected Readings from the 23rd Annual Conference of the International Visual Literacy Association.* Blacksburg: International Visual Literacy Association, 1992.

BADDELEY, A.: *Human Memory. Theory and Practice*. Hillsdale, N.J.: Lawrence Erlbaum & London: Hove, 1990.

BALLSTAEDT, S.-P.: *Integrative Verarbeitung bei audio-visuellen Medien*. [*Integrated Processing of Audio-Visual Media.*] Tübingen: Deutsches Institut für Fernstudien, 1987 (= Forschungsbericht Nr. 46).

BARNHURST, K.G.: *Seeing the Newspaper*. New York: St. Martin's Press, 1994.

BEAKLY, B. / LUDLOW, P.: *The Philosophy of Mind. Classical Problems. Contemporary Issues*. Cambridge et al.: MIT [Massachusetts Institute of Technology] Press, 1992.

BERRY, C. / CLIFFORD, B.R.: *Learning from Television News: Effects of Presentation and Knowledge on Comprehension and Memory*. London: North East London Polytechnic, 1986 (= Experimental Research at the Psychology Department. North East London Polytechnic. 1981-1984).

BERTIN, J.: *Graphische Semiologie. Diagramme. Netze. Karten.* [*Semiology of Graphics. Diagrams, Networks, Maps.*] Translated by G. JENSCH, D. SCHADE, and W. SCHARFE. Berlin, New York: Walter de Gruyter, 1974.

BERTIN, J.: *Graphische Darstellungen und die graphische Weiterverarbeitung der Information.* [*Graphical Representations and the Graphical Processing of Information.*] Translated by W. SCHARFE. Berlin, New York: Walter de Gruyter, 1982.

BERTIN, J.: *Semiology of Graphics. Diagrams, Networks, Maps.* Translated by W.J. BERG. Madison: University of Wisconsin Press, 1983.

BRANDER, S. / KOMPA, A. / PELTZER, U.: *Denken und Problemlösen*. [*Thinking and Problem Solving.*] Opladen: Westdeutscher Verlag, 1985.

COSTIGAN-EAVES, P.: *Data Graphics in the 20th Century. A Comparative and Analytic Survey*. Dissertation (Rutgers University. The State University of New Jersey (New Brunswick)). Ann Arbor: UMI 8424036, 1984.

CRAIK, F.I.M. / LOCKHARD, R.S.: Levels of processing: A framework for memory research. In: Journal of Verbal Learning and Verbal Behavior, 11, 1972, pp. 671-684.

CRAIK, F.I.M. / TULVING, E.: Depth of processing and the retention of words in episodic memory. In: Journal of Experimental Psychology: General, 104, 1975, pp. 268-294.

CULBERTSON, H.M.: Words vs. pictures: Perceived impact and connotative meaning. In: *Journalism Quarterly*, 51, 1974: pp. 226-237.

DAVID, P.: Accuracy of visual perception of quantitative graphics: An exploratory study. In: *Journalism Quarterly*, Vol. 69, No. 2, 1992: pp. 273-292.

DAVID, P.: *Accuracy of Perception of the Different Faces of the Pie.* Columbus, Ohio: Paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication at the annual convention in Kansas City, 1993.

DAVID, P.: Seeing is believing: Comparative performance of the pie and the bar. In: *Newspaper Research Journal*, Vol. 17, Nos. 1 and 2, 1996: pp. 89-104.

EVELAND, JR., W.P.: A cognitive-motivational model of learning from news may offer insights. In: *CT&M Concepts (Newsletter of the Communication Theory & Methodology Division of AEJMC)*, Vol. 26, No.1, Winter 1997, 1997: p. 7.

FARAH, M.J.: Knowledge from text and pictures: A neurophysiological perspective. In: MANDL, H. / LEVIN, J.R. (Eds.): *Knowledge Acquisition from Text and Pictures.* Amsterdam: North-Holland, 1989.

FLEMING, M.L.: The picture in your mind. In: *Audio-Visual Communication Review*, 25, 1977: pp. 43-62.

FLEMING, M.L. / SHEIKHIAN, M.: Influence of pictorial attributes on recognition memory. In: *Audio-Visual Communication Review*, 20, 1972: pp. 423-441.

FOOTE, J.S. / SAUNDERS, A.C.: Graphic formats in network television news. In: *Journalism Quarterly*, 67, 1990: pp. 501-507.

GARCIA, M.R. / STARK, P.M.: *Eyes on the News.* St. Petersburg: The Poynter Insitute, 1991.

GLUCKSBERG, S.: Commentary: the functional equivalence of common and multiple codes. In: *Journal of Verbal Learning and Verbal Behavior*, 23, 1984: pp. 100-104.

GODDEN, D.R. / BADDELEY, A.D.: Context-dependant memory in two natural environments: On land and under water. In: *British Journal of Psychology*, 66, 1975: pp. 325-331.

GRIFFIN, J.L. / STEVENSON, R.L.: *The Influence of Statistical Graphics on Newspaper Reader Knowledge Gain.* Montreal: A paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication, August, 1992, 1992a.

GRIFFIN, J.L. / STEVENSON, R.L.: Influence of text and graphics in increasing understanding of foreign news content. In: *Newspaper Research Journal*, Vol. 13, Nos. 1 and 2, 1992b: pp. 84-99.

GRIFFIN, J.L. / STEVENSON, R.L.: *The Effectiveness of "How" Graphics and Text in Conveying Basic News Story Information.* Kansas City: A paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication, meeting in Kansas City, August, 1993, 1993.

GRIMES, T.: Why we should not trust memories of tv news. In: *Visual Communication Quarterly*. Vol. 3, No. 4, Fall 1996, 1996: pp. 8-11, 16.

HÄNGGI, D.: *Visuelle Vorstellungsfähigkeit.* [*Power of visual imagination.*] Bern et al.: Huber, 1989 (= Freiburger Beiträge zur Pschologie; Bd. 5).

HILLIARD, R.D.: The graphics explosion: Questions remain about roles. In: *Journalism Quarterly*, 66, 1989: pp. 192-194.

HOLICKI, S.: *Pressefoto und Pressetext im Wirkungsvergleich. Eine experimentelle Untersuchung am Beispiel von Politikerdarstellungen.* [*Comparing Effects of Press Photography or Press Writing. An Experimental Study on the Representation of Politicians.*] München: Reinhard Fischer Verlag, 1993 (= Reihe Medien-Skripten; Bd. 17).

HOLLANDER, B.A.: *Information Graphics and the Bandwagon Effect: Does the Visual Display of Opinion Aid in Persuasion?* Montreal: A paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication, August, 1992, 1992.

HOLLANDER, B.A.: *Unintended Effect: Persuasion by the Graphic Presentation of Public Opinion Poll Results*. Athens, Georgia: Paper presented to the Visual Communication Division of the Association in Journalism and Mass Communication, Kansas City, August 1993, 1993.

HOLLANDER, B.A.: Newspaper graphics and inadvertent persuasion. In: *Visual Communication Quarterly*, Vol. 1, No. 1, 1994: pp 8-9.

HOLMES, N.: *Designer's Guide to Creating Charts& Diagrams*. New York: Watson-Guptill Publications, 1984.

HOLMES, N.: Time's graphics editor helps you: Get smart about charts. In: *Publish!*, March 1989, 1989: pp. 42-45.

HOLMES, N.: *Pictorial Maps: History. Design. Ideas. Sources*. New York: Watson-Guptill Publications, 1991.

HOLMES, N. / DENEVE, R.: *Designing Pictorial Symbols*. New York: Watson-Guptill Publications, 1985.

HOLMES, N. / DENEVE, R.: *Designing Pictorial Symbols*. Paperback-Edition. New York: Watson-Guptill Publications, 1990.

HOUGHTON, H.A. / WILLOWS, D.M. (Eds.): *The Psychology of Illustration. Volume 2: Instructional Issues*. New York et. al.: Springer-Verlag, 1987.

JENKINS, J.R. / NEALE, D.C. / DENO, S.L.: Differential memory for picture and word stimuli. In: *Journal of Educational Psychology*, 58, 1967: pp. 303-307.

KELLY, J.D.: The data-ink ratio and accuracy of newspaper graphs. In: *Journalism Quarterly*, Vol. 66, No. 3, 1989: pp. 632-639.

KELLY, J.D.: *The Effect of Visual Attractiveness on the Accuracy of Information Recalled from Newspaper Graphs*. Dissertation (Indiana University). Ann Arbor: UMI 9030384, 1990a.

KELLY, J.D.: *The Graph Makers. A Survey of the Newspaper Editorial Workers who Create Charts and Graphs*. Minneapolis: A paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication at the annual convention in Minneapolis, Minnesota, August, 1990, 1990b.

KELLY, J.D.: The effects of display format and data density on time spent reading statistics, tables and graphs. In: *Journalism Quarterly*, 70, 1993: pp. 140-149.

KIRKPATRICK, E.A.: An experimental study of memory. In: *Psychological Review*, 1, 1894: pp. 602-609.

KNIEPER, T.: *Infographiken: Das visuelle Informationspotential der Tageszeitung.* [*Infographics: The Visual Power of the Dailies.*] München: Reinhard Fischer Verlag, 1995 (= Reihe Medien-Skripten; Bd. 23).

KNIEPER, T.: "Grafisch verpackt". ["Wrapped graphically".] In: *Journalist. Das deutsche Medienmagazin*, May 1996, 1996a: pp. 30-31.

KNIEPER, T.: Infos im Blick. [View on Information.] In: *Journalist. Das deutsche Medienmagazin*, November 1996, 1996b: pp. 84-85.

KNIEPER, T. / EICHHORN, W.: Die Akzeptanz von Infographiken in deutschen Tageszeitungsredaktionen. [The acceptance of infographics in German editor's offices.] In: *Zeitungstechnik, die Monatszeitschrift der IFRA (INCA-FIEJ Research Association), the International Association for Newspaper and Media Technology*, April 1994, 1994: pp. 42-45.

KOSSLYN, S.M.: *Image and Mind.* Cambridge: Havard University Press, 1980.

KOSSLYN, S.M.: *Ghosts in the Mind's Machine*. New York: W.W. Norton, 1983.

LESTER, P.: Use of visual elements on newspaper front pages. In: *Journalism Quarterly*, 65, 1988: pp. 760-763.

LEVIE, H.W. / LENTZ, R.: Effects of text illustrations: A review of research. In: *Educational Communication and Technology Journal*, 30, 1982: pp. 195-232.

MANDL, H. / LEVIN, J.R. (Eds.): *Knowledge Acquisition from Text and Pictures.* Amsterdam: North-Holland, 1989.

MARTINSON, B.E.: *Information Representation: A Comparison of Data Structures Represented in Pictorial and Non-Pictorial Formats.* Dissertation (Minneapolis: University of Minnesota). Ann Arbor: UMI 9202830, 1991.

MAYER, R.E. / GALLINI, J.K.: When is an illustration worth ten thousand words? In: *Journal of Educational Psychology*, Vol. 82, No. 4, 1990: pp. 715-726.

MOEN, D.R.: *Newspaper Layout and Design.* 2. ed. Ames: Iowa State University Press, 1989.

MONMONIER, M.: *Maps with the News. The Development of American Journalistic Cartography.* Chicago: University of Chicago Press, 1989.

OTTO, W.: The differential effects of verbal and pictorial representations of stimuli upon responses evoked. In: *Journal of Verbal Learning and Verbal Behavior*, 1, 1962: pp. 192-196.

PAIVIO, A.: *Imagery and Verbal Processes.* New York: Holt, Rinehart & Winston, 1971.

PAIVIO, A.: Imagery and long-term memory. In: KENNEDY, A. / WILKES, A (Eds.): *Images, Perception, and Knowledge.* Dordrecht: Reidel, 1975: pp. 47-71.

PAIVIO, A.: The empirical case for dual coding. In: YUILLE, J.C. (Ed.): *Imagery, Memory and Cognition. Essays in Honor of Allan Paivio*. Hillsdale, N.J.: LEA Erlbaum, 1983.

PAIVIO, A.: *Mental Representations: A Dual Coding Approach*. Oxford: Oxford University Press, 1986.

PAIVIO, A.: *Images in Mind: A Dual Coding Approach*. New York: Harvester, 1991.

PASTERNACK, S. / UTT, S.H.: Reader use & understanding of newspaper infographics. In: *Newspaper Research Journal*. Vol. 11, No. 2, 1990: pp. 28-41.

Price, V. / Czilli, E.J.: Modelling patterns of news recognition and recall. In: *Journal of Communication*. Vol. 46, No. 2, 1996: pp. 55-78.

PUN, W.H.: *News Infographics and Knowledge Gap*. Austin: Unpublished master thesis, University of Texas, 1991.

PYLYSHYN, Z.W.: What the Mind's Eye tells the Mind's Brain: A Critique of Mental Imagery. In: J. M. Nicholas (Ed.): *Images, Perception, and Knowledge*, Reidel, 1977: pp. 1-36.

RAMAPRASAD, J.: Informational graphics in newspapers: Attention, information retrieval, understanding & recall. In: *Newspaper Research Journal*, Vol. 12, No. 3, 1991: pp. 92-103.

REGINEK, K.B.: *Grafikeinsatz in Fernsehnachrichten. Eine Untersuchung zu Erinnerungsleistung und Verständnis beim Rezipienten. [Infographics in Television News: Studies on Recall and Comprehension.]* München: Unpublished diploma thesis, Dept. of Communication Studies, Ludwig-Maximilians-University Munich, 1995.

SALOMON, G.: Learning from text and pictures: Reflections on a meta-level. In: MANDL, H. / LEVIN, J.R. (Eds.): *Knowledge Acquisition from Text and Pictures*. Amsterdam: North-Holland, 1989: pp. 73-82.

SCHARFE, W.: Newspaper maps in Germany. In: MESENBURG, P. (Ed.): *Proceedings of the 16th International Cartographic Conference: Cologne / Köln, 3-9 May 1993. Volume 1*. Bielefeld: International Cartographic Association (On behalf of the German Society of Cartography), 1993: pp. 255-264.

SCHARFE, W.: German journalistic cartography: The first reader's poll on maps in newpapers. In: INTERNATIONAL CARTOGRAPHIC ASSOCIATION (ICA) (Ed.): *Cartography Crossing Borders. Barcelona, Catalunya / España, September 3rd-9th, 1995, Proceedings 2 of the 17th International Cartographic Conference / 10th General Assembly of ICA*. Barcelona: Institut Cartogràfic de Catalunya, 1995: pp. 2820-2833.

SCHARFE, W. / BITTER, R.: Lückenfüller oder "Infotainment"? Landkarten in Tageszeitungen. [Maps used by the press: Makeshift or Infotainment?] In: *Forschung. Mitteilungen der DFG 3/96*, 1996: pp. 9-11.

SHEPARD, R.N.: The mental image. In: *American Psychologist*, 33, 1967: pp. 125-137.

SMITH, S. M. / GLENBERG, A. / BJORK, R.A.: Enivironmental context and human memory. In: *Memory and Cognition*, 6, 1978: pp. 342-353.

SMITH, E.J. / HAJASH, D.J.: Informational graphics in 30 daily newspapers. In: *Journalism Quarterly*, 65, 1988: pp. 714-718.

STARK, P.M. / HOLLANDER, B.A.: *Information Graphics. Do They Help Readers Understand News Events?* Minneapolis: Paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication. August 1990.

STEVENSON, R.L. / GRIFFIN, J.L.: *The Effectiveness of Locator Maps in Increasing Reader Understanding of the Geography of Foreign News.* Miami: A paper presented to the International Communication Association, meeting in Miami, May 1992.

TANKARD, Jr., J.W.: Quantitative graphics in newspapers. In: *Journalism Quarterly*, Vol. 64, Nos. 2 and 3, 1987: pp. 406-415.

TANKARD, Jr., J.W.: *Effects of Chartoons and Three-Dimensional Graphs on Interest and Information Gain.* Austin, Texas: Paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication at the annual convention in Portland, Oregon, July, 1988.

TANKARD, Jr., J.W.: Effects of chartoons and threedimensional graphs on interest and information gain. In: *Newspaper Research Journal*, 10, 1989: pp. 91-103.

TANKARD, Jr., J.W.: *Visual Crosstabs: A Technique for Enriching Information Graphics.* Austin, Texas: Paper presented to the Visual Communication Division of the Association for Education in Journalism and Mass Communication at the annual convention, August, 1992, in Montreal, 1992.

TANKARD, Jr., J.W.:Visual crosstabs: A technique for enriching information graphics. In: *Mass Comm Review*, Vol. 21, Nos. 1 and 2, 1994: pp. 49-66.

TUFTE, E.R.: *The Visual Display of Quantitative Information.* 12th printing. (Reprint from 1983.) Cheshire: Graphics Press, 1992.

WAINER, H.: Making graphs fit to print: Part one. In: *Newspaper Design Notebook*, Vol. 2, No. 6, 1981: pp. 1, 10-16.

WAINER, H.: Making graphs fit to print: Part two. In: *Newspaper Design Notebook*, Vol. 3, No. 1, 1982: pp. 3-5.

WAINER, H.: How to display data badly. In: *The American Statistician*, Vol. 38, No. 2, 1984: pp. 137-147.

WANTA, W. / REMY J.: Information recall of 4 elements among young newspaper readers. In: *Newspaper Research Journal*, Vol. 16, No. 2, 1995: pp. 112-123.

WARD, D.B.: The effectiveness of sidebar graphics. In *Journalism Quarterly*, Vol. 69, No. 2, 1992: pp. 318-328.

WATKINS, M.J. / TULVING, E.: Episodic Memory: When recognition fails. In: *Journal of Experimental Psychology: General*, 104, 1975: pp. 5-29.

WEIDENMANN, B. (Ed.): *Wissenserwerb mit Bildern. Instrukionale Bilder in Printmedien, Film/Video und Computerprogrammen.* [*Increasing Knowledge Using Pictures: Instructional Pictures Used by Media, Film / Video, and Computer Software.*] Bern, Göttingen, Toronto, Seattle: Verlag Hans Huber, 1994.

WHITE, J.V.: *Using Charts and Graphs: 1000 Ideas for Visual Persuasion.* New York, London: R.R. Bowker Company, 1984.

WICKS, R.H.: Remembering the news: Effects of medium and message discrepancy of news recall over time. In: *Journalism & Mass Communication Quarterly*, Vol. 72, No. 3, 1995: 666-681.

WILCOX, W.: Numbers and the news: Graph, table or text? In: *Journalism Quarterly*, 41, 1964: pp. 38-44.

WILLOWS, D.M. / HOUGHTON, H.A. (Eds.): *The Psychology of Illustration. Volume 1: Basic Research.* New York et. al.: Springer-Verlag, 1987.

WILDBUR, P.: *Information Graphics: A Survey of Typographic, Diagrammatic and Cartographic Communication.* New York: Van Nostrand Reinhold Company, 1989.